DOCUMENT RESUME

ED 267 979 SE 046 501

AUTHOR	Hines, Jody M., Ed.
TITLE	Recent Graduate Works and Programs in Environmental Education and Communications. Volume VIII.
INSTITUTION	North American Association for Environmental Education, Troy, OH.; Northern Iowa Univ., Cedar Falls.
PUB DATE	Dec 85
NOTE	75p.; For earlier volumes in this series, see ED 180 779, ED 191 655, ED 201 506, ED 223 431, ED 244 790 and ED 257 647. Abstracts contain small print.
AVAILABLE FROM	North American Association for Environmental Education, P.O. Box 400, Troy, OH 45373 ($5.00 members, $6.00 non-members).
PUB TYPE	Reference Materials - General (130)
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	Communication (Thought Transfer); Doctoral Dissertations; Elementary Secondary Education; *Environmental Education; *Graduate Study; Higher Education; Mass Media; *Masters Theses; Media Research; Nonformal Education; Outdoor Education; Parks; *Program Descriptions; Site Analysis; Teacher Education
IDENTIFIERS	*Environmental Communications; *Environmental Education Research; Interpretation (Environmental)

ABSTRACT

Compiled are 31 abstracts of recent master's theses and doctoral dissertations in environmental education (EE) and communications. These abstracts are organized into seven categories: (1) site analysis (descriptions and development plans for areas to be used for EE); (2) parks and camps-users and interpreters (studies dealing with park and camp programs, especially user characteristics and interpretive techniques); (3) media communications (studies of the effectiveness of various forms of media; (4) student-centered studies (research on student characteristics); (5) teacher-centered studies (research on training, attitudes, and behavior of teachers and interpreters); (6) citizen-centered studies (research dealing with the attitudes, values, and administration of citizens in environmental problems); and (7) EE philosophy, law, and other areas. Each abstract includes title, author, date of completion, institution, department, thesis/dissertation advisor, and source where full thesis/dissertation may be obtained. An index to abstracts published in previous volumes and an alphabetical list by state of institutions offering graduate programs in environmental education and communications are also provided, as is a list of institutions in Canada offering such programs. Each entry includes a brief description of the program and, when applicable, the degree(s) offered. (JN)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED267979

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
X This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

RECENT GRADUATE WORKS AND PROGRAMS IN ENVIRONMENTAL EDUCATION AND COMMUNICATIONS

Prepared for the

North American Association for Environmental Education

December 1985
Volume VIII

"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY
Joan C. Heidelberg
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

SE 046 501

CONTENTS

Introduction ii

Site Analysis 1

Parks & Camps: Users & Interpreters 3

Media Communications 7

Pupil-Centered Studies 10

Teacher-Centered Studies 15

Citizen-Centered Studies 17

EE Philosophy, Administration & Other 22

Index to Past Volumes 25

Graduate Programs in Environmental Education and Communications 49

Copies of this volume, as well as the 1978 through 1984 editions, are available from: NAEE, P. O. Box 400, Troy, Ohio 45373 for $5.00 for NAEE members and $6.00 for non-members.

If you with to contribute to future publications, please contact Dr. Jody M. Hines, Department of Teaching, University of Northern Iowa, Cedar Falls, Iowa 50613-3593.

INTRODUCTION

Recent Graduate Works and Programs in Environmental Education and Communications is Volume VIII in a series that continues to attract and publish relevant theses and project abstracts. This reference work is a cooperative effort of the North American Association for Environmental Education and the University of Northern Iowa.

The publication's title reflects an active desire to stimulate interest in nontraditional environmental education research that has escaped the attention that such a growing body of works deserves. At the same time, the publishers remain committed to reproducing abstracts of masters theses and doctoral dissertations that also enrich the environmental education field.

Abstracts included in this volume are organized into seven categories: (1) Site Analysis--descriptions and development plans for areas to be used for environmental education; (2) Parks and Camps: Users and Interpreters--studies dealing with park and camp programs, especially user characteristics and interpretive techniques; (3) Media Communications--examinations of the effectiveness of various forms of media; (4) Pupil-centered Studies--research dealing with characteristics of pupils; (5) Teacher-Centered Studies--research focusing on training, attitudes, and behavior of teachers and interpreters; (6) Citizen-Centered Studies--research dealing with the attitudes, values, and involvement of citizens in environmental problems; (7) EE Philosophy, Administration and Others--studies dealing with environmental education philosophy and administration of facilities, as well as studies which do not fit into categories 1-6 above.

The annual request for abstracts begins in the spring of the publication year. Explanatory letters and printed abstract forms are mailed to an ever-increasing list of graduate departments of environmental education, park administration, natural history interpretation, environmental studies, communications, journalism, and other related areas. This broad coverage is designed to encourage responses from a range of programs which generate research related to environmental education and communications.

Volume VI of Recent Graduate Works added a new feature, an Index to Past Volumes. This feature has been continued here in Volume VIII so that readers may quickly survey published abstracts by year and subject category for items of potential interest. The relevant abstracts may then be located and studied in the appropriate volumes. (Volume I was published in 1978.) In addition, this publication offers an expanded directory of graduate programs in environmental education and communications. It is hoped that these aids increase the value of Recent Graduate Works as a reference tool for educators, administrators and students.

The lifeblood of these volumes is comprised of the institutions they feature and the readers who utilize them. At its best, the annual publication can operate on the leading edge of the environmental education field, documenting research trends and educational opportunities. The publishers wish to thank the contributors to this year's issue. They and others are encouraged to provide abstracts, program information and suggestions so that the 1986 volume will reflect continued improvement of the series' quality and usefulness.

Jody M. Hines
Project Director and Editor

SITE ANALYSIS

Environmental Education / Communication Project or Thesis Report Form

North American Association for Environmental Education

TITLE Nature Around the Corner: Preference and Use of Nearby Natural Areas

AUTHOR Lisa Bardwell DATE OF COMPLETION Sept. 1985

INSTITUTION University of Michigan

DEPARTMENT / PROGRAM School of Natural Resources

INDICATE APPROPRIATE CATEGORY:

☒ Master's Thesis ☐ Project, Paper, Article ☐ Doctoral Dissertation

THESIS ADVISOR Rachel Kaplan/ William Stapp

WHERE FULL THESIS IS AVAILABLE University of Michigan

While the value of nature has intuitive appeal, the empirical support for its importance, especially in urban settings is only beginning to accumulate. This study contributes to that emerging understanding by examining the role of small natural areas in the immediate vicinity of an urban housing complex. It explored how people feel about these areas and how the perceived size of the natural areas near home related to their use. The interpretation of nature was broad. Photographs used included both more natural abandoned fields and woods as well as manicured lawns.

Thirty-two residents participated in the survey by evaluating photographs of fourteen nearby natural areas in terms of how much they liked and used the areas, what size they perceived them to be and how adequate that size seemed.

There was a dramatic difference in preference between the relatively unpopular Backyards and Frontyards and the more favored public areas in and around the complex. The less preferred areas were seen as very small and inadequate in size. Those who saw these small areas as less inadequate, however, rated them higher in preference. For the areas seen as larger, there was no significant relationship with the rated adequacy of this size nor with preference. This pattern suggested that it was not as much the actual size of an area, as it was how appropriate that size seemed for what one wanted to do there. That is, it mattered that an area felt too small or too big.

The influence of use frequency on how people evaluated size of areas was related in part to the types of activities one could do in the area. Places where one could pursue "intentional" activities (i.e. those one chose to do), with more use tended to be regarded as increasingly too small. Those characterized by more "circumstantial" use (e.g. taking out the trash) seemed less inadequate with increased use.

A measure of familiarity, how long one had lived in the complex, related to preference and use of some of the more remote, more natural areas. Newcomers and longer-term residents liked and frequented them more often than the one-to-two year residents.

This study reaffirms that nearby natural areas do matter to people and that providing people with just any kind of area is not enough. The tradeoff between public and private space is a delicate one, one that needs to consider people's sensitivity to areas that feel too large and too small. Furthermore, recreation is but one use of nearby natural areas. The view from the window, the glance out of the car, the green vista from the hill are enjoyed and cherished moments -- uses as it were -- as well.

BEST COPY AVAILABLE

Environmental Education / Communication Project or Thesis Report Form

North American Association for Environmental Education

TITLE Horsetooth Mountain Park and Lory State Park: Natural Resourse Inventory, History and User Survey

AUTHOR A. Willene L. Hendon DATE OF COMPLETION August, 1984

INSTITUTION Colorado State University

DEPARTMENT / PROGRAM Recreation Resources/Environmental Interpretation

INDICATE APPROPRIATE CATEGORY:

☒ Master's Thesis ☐ Project, Paper, Article ☐ Doctoral Dissertation

THESIS ADVISOR Dr. Charles L. Mahoney

WHERE FULL THESIS IS AVAILABLE Morgan Library, Colorado State University

A basic step in the planning process is an inventory. For recreational planning, the inventory identifies and locates the physical, biological and cultural resources of the study area. This paper describes the inventory of the physical, natural and cultural resources and indicates areas with special management considerations at Lory State Park and Horsetooth Mountain Park. The cultural resources are discussed as native man and recorded history.

A user survey determined and compared visitor socio-demographic characteristics, perceived problems, management preferences and interpretation preferences. The survey instrument was a color coded questionnaire distributed at park entrances. Of the 600 questionnaires distributed, 442 or 73 percent were returned. Descriptive variables were obtained by applying computer programs to the data.

These research results form a base for future public information programs, indicate areas for additional research, provide resource planning information, and provide a source of public participation in determining management objectives.

Environmental Education / Communication Project or Thesis Report Form

North American Association for Environmental Education

TITLE A Volunteer Program Proposal for the Boyertown Museum of Historic Vehicles

AUTHOR Daniel J. Cech DATE OF COMPLETION 1984

INSTITUTION The Pennsylvania State University

DEPARTMENT / PROGRAM Department of Recreation and Parks

INDICATE APPROPRIATE CATEGORY:

☐ Master's Thesis ☒ Project, Paper, Article ☐ Doctoral Dissertation

THESIS ADVISOR Jerold E. Elliott

WHERE FULL THESIS IS AVAILABLE Interlibrary Loan, Pattee Library, University Park, PA 16802

This study was undertaken to develop guidelines for a proposed volunteer program at the Boyertown Museum of Historic Vehicles. Literature was reviewed on volunteer recruitment and training, volunteer program development, interpretation of cultural history, and management of small museums and historic sites in order to develop volunteer program guidelines. As identified from this study, components of the volunteer program involve the museum director to recruit, train, and supervise volunteer personnel for eight service functions: vehicle maintenance, reception duties, museum guide services, exhibits, research, programs, memberships, and promotions. The volunteer program is intended to promote community awareness and involvement in the museum, provide an outlet for personal interest and satisfaction, and cultivate supplemental staff to accomplish daily museum operations.

BEST COPY AVAILABLE

PARKS & CAMPS:
USERS & INTERPRETERS

Environmental Education / Communication
Project or Thesis Report Form

North American Association for Environmental Education

TITLE Development and Testing of an Interpretive Services Planning Process for the Green Mountain National Forest.

AUTHOR Richard Paradis DATE OF COMPLETION 1/18/85

INSTITUTION University of Vermont

DEPARTMENT / PROGRAM School of Natural Resources/Natural Resource Planning

INDICATE APPROPRIATE CATEGORY:

[X] Master's Thesis [ ] Project, Paper, Article [ ] Doctoral Dissertation

THESIS ADVISOR Dr. William Hendrix

WHERE FULL THESIS IS AVAILABLE School of Natural Resources, University of Vermont (or from author)

Interpretation has traditionally been used as a visitor service in many parks and forests. It has served as the communication link between visitors and the resource by expanding their knowledge of and developing their appreciation for the natural and cultural features of these areas. In recent years, emphasis has shifted to using interpretation to solve management problems. This is accomplished by encouraging thoughtful and proper use of resources, by minimizing human impact on those resources, and by promoting public support for managing agency policies and goals.

A planning process was designed to help planners and managers develop sound choices and decisions for interpretive services. This interpretive services planning process was then tested by experimentally applying it to a selected area of the Green Mountain National Forest in Vermont. Specific interpretive services policy and objectives were determined and information was collected that described and inventoried forest resources, visitors, and existing interpretive efforts. Recommendations were made for these topics, media choices, and program monitoring and evaluation techniques. A final evaluation was performed on the application of the planning process in an attempt to determine overall process applicability and to identify the components of the planning process that proved to be most useful.

BEST COPY AVAILABLE

BEST COPY AVAILABLE

Environmental Education / Communication Project or Thesis Report Form

North American Association for Environmental Education

TITLE Importance of Wildlife to State Park Visitors

AUTHOR Jonathan P. Streich DATE OF COMPLETION 1984

INSTITUTION The Pennsylvania State University

DEPARTMENT / PROGRAM Department of Recreation and Parks

INDICATE APPROPRIATE CATEGORY:

☒ Master's Thesis ☐ Project, Paper, Article ☐ Doctoral Dissertation

THESIS ADVISOR Jerold E. Elliott

WHERE FULL THESIS IS AVAILABLE Interlibrary Loan, Pattee Library, University Park, PA 16802

In this study, the relative importance of wildlife among hunters, nonhunters, and antihunters visiting Pennsylvania State Parks was examined. A selected sample of day use visitors to four Pennsylvania State Parks was surveyed during the winter of 1980-81 using an instrument developed for this study. A total of 129 surveys (95% return rate) were analyzed using frequency distributions, crossbreaks, and X^2 statistics. The results suggested that hunters derived more satisfaction from wildlife than either nonhunters or antihunters. Overall, 71% of the respondents indicated that wildlife was important to the state park visit. A majority (55%) of the respondents were willing to pay $.75 for a wildlife pamphlet. Some recommendations for state parks were derived from this research.

Environmental Education / Communication Project or Thesis Report Form

North American Association for Environmental Education

TITLE Marketing Interpretive Programs: A Description of Interpretive Product Use Markets at National Historic Sites in the Northeast United States

AUTHOR Donald B. K. English DATE OF COMPLETION 1984

INSTITUTION The Pennsylvania State University

DEPARTMENT / PROGRAM Department of Recreation and Parks

INDICATE APPROPRIATE CATEGORY:

☒ Master's Thesis ☐ Project, Paper, Article ☐ Doctoral Dissertation

THESIS ADVISOR David R. Chase

WHERE FULL THESIS IS AVAILABLE Interlibrary Loan, Pattee Library, University Park, PA 16802

This paper explores and describes the market for interpretive services at National Historic Sites and Monuments in the Northeast United States. Interpretive services must relate to the audiences that consume them if these services are to be effective. Marketing is a process that matches products with consumers, and has been adopted successfully in other areas of recreation. By explicitly adopting a marketing orientation in interpretive product planning, interpreters can better understand their markets and increase the effectiveness of their products. The historic park market differs from the scenic/recreational park market in several ways. The proportions of visitors to the historic parks who are senior citizens, who use personal interpretive programs, or who use no interpretive programs are higher than for the recreational/scenic park market. The data indicate that users of personal interpretive programs are unlikely to be foreign or non-English speaking visitors, teenagers, or local visitors; the users of nonpersonal interpretation are likely to be foreigners or visitors who speak no English; and park visitors who use no interpretation are likely to be teenagers.

BEST COPY AVAILABLE

BEST COPY AVAILABLE

Environmental Education / Communication
Project or Thesis Report Form

North American Association for Environmental Education

TITLE Social Isolation Among National Park Service Rangers

AUTHOR Donna Paul Bessken DATE OF COMPLETION April, 1985

INSTITUTION Slippery Rock University

DEPARTMENT / PROGRAM Parks & Recreation/Environmental Education

INDICATE APPROPRIATE CATEGORY:

☒ Master's Thesis ☐ Project, Paper, Article ☐ Doctoral Dissertation

THESIS ADVISOR Dr. Craig C. Chase, Dr. J.W. Shiner, Dr. Emil Bend, Mr. Eugene Boyer

WHERE FULL THESIS IS AVAILABLE Bailey Library - Slippery Rock University, Slippery Rock, PA

In 1984, a mail survey was conducted to study 113 National Park Service Rangers stationed at socially isolated locations within randomly selected rural and remote parks in the Rocky Mountain and Western Regions. Eighty-four responses were analyzed using descriptive statistics and the non-parametric statistics of Chi-square, Cramer's V, and contingency coefficients. The study attempted to identify characteristics of rangers who had adjusted successfully to social isolation at the sites. Results indicated socio-demographic data were not clear predictors of success. Recreational preferences as addressed by this study were not clear indicators of successful adjustment. Measures of adjustment or adaptive competence need refinement.

The null hypothesis that there is no difference in the characteristics of rangers who have adjusted to isolated sites and those who have not cannot be rejected. There is supporting evidence to suggest highly motivated, independent, socially compatible and professionally competent individuals with positive attitudes are likely to adjust successfully to isolated assignments. These traits parallel those identified by other researchers for successful adaptation to exotic environments.

Implications for park managers regarding personnel selection can be found in this data and in comparisons of parks and other exotic environments. Managers can improve the quality and quantity of amenities for resident rangers, improve communications and increase opportunities for off-site interaction with people and ideas. Managers can also facilitate adjustment by providing accurate information about the site to prospective rangers, clarifying the duration of the isolated assignment and by developing an understanding of the dynamics of social interaction in isolated locations.

Environmental Education / Communication
Project or Thesis Report Form

North American Association for Environmental Education

TITLE Theme Park Use by Older Persons: An Exploratory Investigation

AUTHOR Michael A. Blazey DATE OF COMPLETION 1984

INSTITUTION The Pennsylvania State University

DEPARTMENT / PROGRAM Department of Recreation and Parks

INDICATE APPROPRIATE CATEGORY:

☐ Master's Thesis ☐ Project, Paper, Article ☒ Doctoral Dissertation

THESIS ADVISOR Geoffrey C. Godbey

WHERE FULL THESIS IS AVAILABLE Interlibrary Loan, Pattee Library, University Park, PA 16802

This investigation examined selected aspects of theme park visitation by 220 persons over the age of 55 visiting Hersheypark in Hershey, Pennsylvania, between June 15 and July 20, 1983. A 93-item interview schedule addressed exploratory research questions regarding assessment of the park environment; logistics of visitation; motivations, meanings and satisfactions; and on-site behavior. Results were reported using descriptive statistics. Chi-square and difference in means tests were peformed on selected variables. Significant variation by sex was found in desired companion, relationship of accompaniment, and purchases from concession stands. Significant variation by age group, young-old versus old-old, was found in mean age of desired companion, age of companions, the number of rides ridden, and zoo visitation. It was concluded that the predictability of the theme park experience, the regional nature of the park, and a wide variety of activities led to high levels of satisfaction. Respondents were not found to visit in guardian roles.

MEDIA COMMUNICATIONS

Environmental Education / Communication Project or Thesis Report Form

North American Association for Environmental Education

TITLE A COMPARISON OF THE EFFECTIVENESS OF FOUR UNMANNED INTERPRETIVE TECHNIQUES IN A PARK SETTING

AUTHOR THOMAS J. STOLARZ DATE OF COMPLETION NOVEMBER 1984

INSTITUTION BALL STATE UNIVERSITY

DEPARTMENT / PROGRAM DEPARTMENT OF NATURAL RESOURCES

INDICATE APPROPRIATE CATEGORY:

☒ Master's Thesis ☐ Project, Paper, Article ☐ Doctoral Dissertation

THESIS ADVISOR DEPARTMENT OF NATURAL RESOURCES

WHERE FULL THESIS IS AVAILABLE

The purpose of this study was to investigate the difference in effectiveness of four unmanned interpretive devices, which were: 1) a visual shock display, 2) a written brochure, 3) written signs, and 4) an automated audiovisual presentation. These technique types have only been sparsely studied in the past with regard to their comparitive efficacy. Examination of the differences in relative effectiveness was warranted to help establish guidelines for future interpretive technique design and utilization.

The four techniques, along with a control, were compared two at a time using aluminum can litter/recycling as the concept being interpreted. The number of aluminum cans recovered from park trash containers during each treatment period was used to evaluate the techniques. The comparison between each set of techniques was made using a z-statistic for a large sample, normal population. The number of cans purchased prior to park visition was also analyzed with this same statistic to determine if this outside factor had any influence on the data.

Of the four unmanned interpretive techniques tested. the written sign and the visual shock display were significantly more effective at interpreting the concept than were the written brochure, automated audiovisual program or the control. The written sign ard the visual shock were equally effective, while the automated audiovisual program and the written brochure were not significatnly more effective than a control. Cans pruchased prior to park visitation had no detectable effect on these results. Also, rainfall and temperature patterns showed no correlation with the data.

BEST COPY AVAILABLE

Environmental Education / Communication Project or Thesis Report Form

North American Association for Environmental Education

TITLE ENERGY AND ENVIRONMENTAL POLICYMAKING IN WISCONSIN STATE GOVERNMENT: UNIVERSITY FACULTY PARTICIPATION AND INPUT

AUTHOR Karen J. Sy DATE OF COMPLETION 1984

INSTITUTION University of Wisconsin-Madison

DEPARTMENT / PROGRAM Land Resources

INDICATE APPROPRIATE CATEGORY:

☐ Master's Thesis ☐ Project, Paper, Article ☒ Doctoral Dissertation

THESIS ADVISOR Gordon Chesters

WHERE FULL THESIS IS AVAILABLE Water Resources Reference Services, Univ. Wisconsin, 1975 Willow Dr., Madison, WI 53706 (avail. on loan only)

State offices in Wisconsin (147) having responsibilities tied to energy or environmental policies identified 303 faculty members they had worked with in the past two years. In-depth interviews were conducted with a random sample of these faculty advisors. Background questionnaires and vita were used to collect data on attitudes, career histories and research activities.

A model linking the type of information provided to phases of the policy-making process was hypothesized from the literature. Log linear analysis was used to test the model. Policymaking is viewed here as an ongoing, cyclic process in which it is possible to distinquish the activities of problem definition, policy formulation, legitimation, implementation and evaluation. There is a correlation between policy formulation and such input as policy options and assessments of impact; and implementation and such input as functional operating assistance, advice on program direction, and site-specific assessments.

The basis for input is cumulative knowledge and expert judgment in 53% of the instances. Current research, site specific evaluations and critical review of materials presented to those in advisory roles are other means for scientists to make the contributions they do.

Faculty are interacting with elected and appointed officials as well as middle management and staff. However, input is most frequently presented to staff. Faculty are most active in ad hoc and appointed roles; research, program collaboration and expert witness assignments are less frequent. The state initiated 67% of the interactions; the contacts were between previous acquaintances 60% of the time; and faculty believed their input had some impact in half of the cases.

At the state level, there is great diversity in the career history of government advisors. Service to the state, often associated with long residence in the state, is the prime motivation for participation. Having flexible time available to develop input is also a significant factor. The faculty scores on an environmental concerns index were not significantly different from citizen scores.

BEST COPY AVAILABLE

Environmental Education / Communication Project or Thesis Report Form

North American Association for Environmental Education

TITLE Journey Together: A Wilderness Celebration

AUTHOR Kenneth L Hanley DATE OF COMPLETION 12/85

INSTITUTION California State University Hayward

DEPARTMENT / PROGRAM Special Major/Teacher Education, EE

INDICATE APPROPRIATE CATEGORY:

☐ Master's Thesis ☒ Project, Paper, Article ☐ Doctoral Dissertation

THESIS ADVISOR Esther Railton Ed.D.

WHERE FULL THESIS IS AVAILABLE California State University at Hayward

In recent years the influx of recreationists entering the wilderness has expanded to staggering amounts. The ecological balance of the wilds might well be in jeopardy due to this tremendous impact. There is an immediate need for materials that can introduce the public to minimal-impact pursuits; sports and recreational activities that are enviornmentally sound.

This project was designed to provide a videotape that would introduce the audience to "environmental sports". A definition of environmental sports is included in order to provide the viewer with a common base of understanding.

The videotape is used by professional outdoor educators, guides and outfitters, and the general teaching community. With the capabilities of the audiovisual medium, the viewer can experience the solitude, excitement, and wonder of the natural world.

A copy of the videotape is available for loan through the Environmental Education Lab located on the campus of California State University, Hayward.

Environmental Education / Communication Project or Thesis Report Form

North American Association for Environmental Education

TITLE Selected Factors Influencing Participation in Resource Recovery Activities at Northwestern Pennsylvania Public and Non-public Schools

AUTHOR Carl R. Hursh Jr. DATE OF COMPLETION 7-15-85

INSTITUTION Slippery Rock University of Pennsylvania

DEPARTMENT / PROGRAM Environmental Education Administration

INDICATE APPROPRIATE CATEGORY:

☒ Master's Thesis ☐ Project, Paper, Article ☐ Doctoral Dissertation

THESIS ADVISOR Dr. Craig C. Chase

WHERE FULL THESIS IS AVAILABLE Bailey Library, Slippery Rock University

Northwestern Pennsylvania public and non-public schools were surveyed to determine resource recovery interest and participation levels and to examine selected influencing factors.

One-fifth of the respondents recycled one or more materials, usually aluminum. Participation was greatest in populous counties with available recycling centers. Non-participants cited insufficient interest, space, and proximity to market as rationale for not recycling. Three-fourths of the respondents expressed interest in resource recovery educational materials.

No significant differences in participation levels existed between school types, grade levels, demographic settings, and proximity to market. No significant difference existed between participant and non-participant interest in resource recovery educational information or programs, but a difference existed in interest in resource recovery as a fund-raiser. A significant difference existed in participation levels between respondents aware of local recycling centers and respondents without such awareness.

Many schools will recycle with fund-raising as an incentive. Awareness initiatives and marketing improvements could positively affect resource recovery participation levels.

BEST COPY AVAILABLE

PUPIL-CENTERED STUDIES

Environmental Education / Communication Project or Thesis Report Form

North American Association for Environmental Education

TITLE A Comparison of Two Residential Environmental Education Workshops Regarding Knowledge Of and Participation In Environmental Action

AUTHOR James R. Jordan DATE OF COMPLETION April 1985

INSTITUTION Southern Illinois University - Carbondale

DEPARTMENT / PROGRAM Curriculum, Instruction, and Media

INDICATE APPROPRIATE CATEGORY:

☒ Master's Thesis ☐ Project, Paper, Article ☐ Doctoral Dissertation

THESIS ADVISOR Dr. H. R. Hungerford & Dr. A. N. Tomera

WHERE FULL THESIS IS AVAILABLE S.I.U.-C. Library

This study investigated the treatment effects that two modes of awareness training, namely issue awareness and environmental action awareness, had on high school students' knowledge of and willingness to participate in responsible environmental behavior. Specifically, this study examined the comparative effects that six day residential environmental education programs, which included instruction in environmental action strategies at the awareness level, had on participant's knowledge of environmental action and self reported environmental behavior in comparison to similar programs not including the environmental action instruction on the same environmental variables.

The findings indicated that the students entered the program with a low level of knowledge concerning environmental action and reported participating in very few behaviors aimed at remediating environmental issues. The group receiving the instruction in environmental action strategies demonstrated a significant increase in their level of knowledge of environmental action while the knowledge level of the group receiving instruction in issues only did not increase. The increase in knowledge of various action strategies paralleled the amount of instruction given to each topic. The participants who received instruction in environmental action reported taking a greater number of environmental actions following the workshop when compared to the number before instruction and when compared to the number reported by the group who did not receive instruction in environmental action. The group which did not receive the action instruction did not report taking a significantly greater number of environmental actions following the workshop when compared to the same time period before instruction.

BEST COPY AVAILABLE

Environmental Education / Communication Project or Thesis Report Form

North American Association for Environmental Education

TITLE The Development of an Instrument for Evaluating the Effects of an Environmental Education Program on Young Children's Environmental Attitudes: A Pilot Study

AUTHOR Jack Chin

DATE OF COMPLETION June, 1985

INSTITUTION Stanford University

DEPARTMENT / PROGRAM Education

INDICATE APPROPRIATE CATEGORY:

☒ Master's Thesis ☐ Project, Paper, Article ☐ Doctoral Dissertation

THESIS ADVISOR

WHERE FULL THESIS IS AVAILABLE Stanford University

The effects of environmental programs on the attitudes of young children was evaluated using an instrument developed in this study. The instrument is comprised of pairs of drawings. Students are instructed to indicate which of a given pair of pictures they like better. Assumptions made in the development of the instrument were that second and third grade students possess environmental attitudes and that environmental education programs have the potential to influence these attitudes.

The instrument was administered to 232 students (294 students originally participating in the study) using a pretest-posttest design. These students were visitors to the Hidden Villa Ranch, an EE center in Los Altos Hills, California. Directions were translated into Spanish for classes with substantial Spanish-speaking populations.

Results show that (1) the instrument can be effectively administered to a large group of children, without the aid of trained personnel, (2) the instrument has the potential for evaluating changes in young children's environmental attitudes, (3) the instrument can be standardized for use by many EE programs or can be customized to assess specific attitudes, and (4) age, gender, and prior EE instruction (either in school or at a center) apparently do not adversely bias students' test performance. Supporting documentation, including sample pairs of drawings, is provided in the appendices.

Environmental Education / Communication Project or Thesis Report Form

North American Association for Environmental Education

TITLE An evaluation of the NatureScope environmental education curriculum series

AUTHOR Susan L. Johns

DATE OF COMPLETION May 1985

INSTITUTION Duke University, Durham, NC 27706

DEPARTMENT / PROGRAM School of Forestry and Environmental Studies

INDICATE APPROPRIATE CATEGORY:

☒ Master's Thesis ☐ Project, Paper, Article ☐ Doctoral Dissertation

THESIS ADVISOR Dr. Curtis J. Richardson

WHERE FULL THESIS IS AVAILABLE SFES Publications Office

An evaluation of NatureScope, an environmental education curriculum series, was completed to determine the overall success of the series. The results of a survey were used in determining a) the method of incorporation of the series into the curriculum, b) the effectiveness of NatureScope as a teaching tool, and c) the enjoyment of the users.

(Continued on next page)

The series was used mostly (64.7%) in schools, from preschool through junior high. Activities of the series were also used in nature centers, clubs, and other locations including the home. Ninety percent of the survey respondents replied that they enjoyed using the first issue (which the survey was based upon) "very much." There was complete agreement (100%) that the students enjoyed the activities. The great appreciation of the series is shown by the result finding that 98.4% of the respondents would recommend NatureScope to their colleagues.

The survey results were also compared to pertinent literature to determine whether NatureScope contains characteristics required of effective environmental education tools. After this evaluation, guidelines for the continuing development of the series were outlined. The National Wildlife Federation has constructed a valuable tool for environmental education which will become even more worthwhile as the program is completed. The ten-year development of NatureScope is expected to result in an excellent series for use by elementary educators and many others.

Environmental Education / Communication Project or Thesis Report Form

North American Association for Environmental Education

TITLE Nature and Education; Learning from the World Around Us

AUTHOR Cathy Donckers DATE OF COMPLETION April, 1985

INSTITUTION Pacific Oaks College

DEPARTMENT / PROGRAM Human Development

INDICATE APPROPRIATE CATEGORY:

☒ Master's Thesis ☐ Project, Paper, Article ☐ Doctoral Dissertation

THESIS ADVISOR

WHERE FULL THESIS IS AVAILABLE Pacific Oaks College, Pasadena, California

Our world appears to be moving toward faster changes and heightened personal individuality, yet our elementary and secondary schools seem to have hidden curricula which teach passivity, resistance to change, inflexibility, and submissive behavior. Teachers feed information to students like data to a computer. This type of class control should no longer be accepted as the governing practice of education. The child learns through interacting with the world, therefore the teacher must see to it that the child has access to the needed experiences. Nature is currently seen as something to be improved upon and as something from which we are separate. Although this world has held a variety of values toward nature, we are now at a point where the majority of a child's experiences come from manmade sources.

Outdoor education can be used to teach mathematics, art, physics, sociology, etc., with just a slight change in perspective. There are many settings in which the teacher can use direct experiences to enhance the childs learning. Adventure education, summer camp and environmental education can provide learning, as well as heightened self-image/respect and responsibility. Within the main body of the discussion are examples and activities associated with successful outdoor programs. Following the main discussion is a journal of the author's experience directing an outdoor education program.

Environmental Education / Communication
Project or Thesis Report Form

North American Association for Environmental Education

TITLE A Systemic Evaluation of an Environmental Investigations Course

AUTHOR Roger William Hamm DATE OF COMPLETION 1985

INSTITUTION Georgia State University

DEPARTMENT / PROGRAM

INDICATE APPROPRIATE CATEGORY:

☐ Master's Thesis ☐ Project, Paper, Article ☒ Doctoral Dissertation

THESIS ADVISOR

WHERE FULL THESIS IS AVAILABLE Georgia State University

The worth of an environmental investigations course was judged using a systematic evaluation. The course was designed to increase scientific knowledge, self-concept, and attitude toward science and science teaching.

Five categories were examined in this study: (1) consistency between concepts, (2) effect on scientific knowledge, self-concept, and science attitudes, (3) activity usefulness, (4) effect on relationships between variables, and (5) course worth.

Program and student (N=28) component data were measured using the "Environmental Science Test", "Tennessee Self-concept Scale", "Academic Self-concept Scale", "Attitude Toward Science and Toward Teaching Science Scale" and informal instruments during the antecedent, transaction, and outcome phase of the course.

Findings obtained from Pearson product-moment correlations and t-tests show: (1) course elements and components to be consistent, (2) a significant increase in scientific knowledge and self-concept, (3) the usefulness of seven course activities, and (4) no positive relationship between variables. Overall, the course (which includes a camping phase and a field trip phase) was judged worthy of adoption.

Environmental Education / Communication Project or Thesis Report Form

North American Association for Environmental Education

TITLE Where do I fit in? Discovering our role in the use of natural resources

AUTHOR James F. Ginley DATE OF COMPLETION May 1985

INSTITUTION Duke University, Durham, NC 27706

DEPARTMENT / PROGRAM School of Forestry and Environmental Studies

INDICATE APPROPRIATE CATEGORY:

☒ Master's Thesis Project ☐ Project, Paper, Article ☐ Doctoral Dissertation

THESIS ADVISOR Dr. Stephen Boyce

WHERE FULL THESIS IS AVAILABLE SFES Publications Office

This program was designed to increase overall understanding and awareness of society's role in the management and use of natural resources. The program has been adopted for use by Durham Academy, Durham, NC, as a supplement to the school's ninth-grade biology curriculum.

The program consists of two parts: (1) a series of daily lessons and activities; (2) a workbook. The lessons may be conducted in as many sessions as desired, including lecture, discussion, outdoor activities, and group exercises. The workbook is designed to complement the daily lessons and includes text, discussion and research questions, activities, and suggested readings. The program covers the following topics: (1) Our Natural Environment; (2) Timber Harvesting: An Example of Using Natural Resources; (3) Careers and Roles in Natural Resource Management; (5) Water for Chapel Hill, NC: An Example of a Natural Resource Management Problem.

The goals of the program are: (1) to develop an increased awareness of the natural environment; (2) to develop a better understanding of the human role in that natural environment, with special regard to the use of natural resources; (3) to provide Durham Academy with an educational program to supplement the school's natural science curriculum; (4) to inspire an open mind to the exploration of new ideas; (5) to inspire a dedication to making better decisions about the use of our natural resources both now and in the future.

TEACHER-CENTERED STUDIES

Environmental Education / Communication Project or Thesis Report Form

North American Association for Environmental Education

TITLE A Survey of Environmental Education in Hamilton County Schools (K-12)

AUTHOR Janice C. Garver DATE OF COMPLETION June 1983

INSTITUTION University of Cincinnati

DEPARTMENT / PROGRAM Secondary Education

INDICATE APPROPRIATE CATEGORY:

[X] Master's Thesis [ ] Project, Paper, Article [ ] Doctoral Dissertation

THESIS ADVISOR

WHERE FULL THESIS IS AVAILABLE University of Cincinnati

A survey was conducted of environmental education courses and programs offered in grades K-12 in Hamilton County, Ohio. Public, private and parochial schools were included in the survey. The survey was conducted by means of a questionnaire mailed to 67 district level administrators, principals, and teachers. A 57 percent response rate resulted which included 5 private, 4 parochial, and 27 public schools.

The findings of the surveys indicated that the Hamilton County schools were employing a variety of approaches to environmental education. The characteristics of environmental education espoused by E. P. Hart (1981) were used as a basis for analyzing the districts EE programs. This analysis showed the local programs to be interdisciplinary, multilevel and to rely somewhat heavily upon the values clarification approach. In addition the programs were found to (1) have an orientation to both the present and the future, (2) encourage active participation and a team approach to teaching/learning and individualized learning, (3) provide productive student-teacher relationships, personal responsibility, and grouped interaction, (4) be community oriented, (5) provide field studies, and (6) demonstrate flexible administrative organizational patterns.

The EE programs were also found to display a number of deficiencies in terms of the Hart characteristics of EE. The programs were shown to display a lack of process development, systems thinking, and urban field studies. In addition, little attempt to incorporate EE concepts and issues into the teacher education process was noted.

One recommendation offered is to place future emphasis on such areas as human population, urban ecology, marine education, energy consumption, and land use management in EE curricula.

Environmental Education / Communication Project or Thesis Report Form

North American Association for Environmental Education

TITLE Minimum Skill Competencies Required for Employment as an Outdoor Leader in a Wilderness Adventure Program

AUTHOR Mark C. Cosgrove DATE OF COMPLETION July 1984

INSTITUTION Southern Illinois University at Carbondale

DEPARTMENT / PROGRAM Science Education

INDICATE APPROPRIATE CATEGORY:

☒ Master's Thesis ☐ Project, Paper, Article ☐ Doctoral Dissertation

THESIS ADVISOR

WHERE FULL THESIS IS AVAILABLE Morris Library, Southern Illinois Univeristy

A list of 53 skill, technical, human relations, and philosophical understanding competencies was prepared from a literature search of 136 sources in an attempt to determine accepted minimum skill competencies required for employment as an outdoor leader in wilderness adventure programs. In addition, 46 personal and professional qualities were derived from the literature search. A panel of 8 professionals in the field of wilderness adventure programming reviewed, evaluated, and commented on this list of competencies.

An additional task of this study was to determine, with the aid of recognized outdoor recreation/leadership curriculums, the amount of field experience time currently required for the attainment of outdoor leadership skill competencies.

Results indicated a lack of consensus by professionals as to what the minimum competencies in the area of skills should be. Although there was general agreement with the original list of skill competencies, there were 12 recommended additions to the list of skill competencies, 34 recommendations for additions or changes in the qualifying categories of minimum, ideal, and program specific competencies and 10 recommendations for clarification in the stated competiencies.

Unanimous agreement was attained in relation to the importance of human relations skills. These were considered to be the most important skills for individuals in outdoor leadership wilderness adventure programs to possess. The amount of field experience time utilized by outdoor curricula varied from 7 days to 45 weeks. Sixteen weeks was given as the optimum time used by a majority of programs.

CITIZEN-CENTERED STUDIES

Environmental Education / Communication Project or Thesis Report Form

North American Association for Environmental Education

TITLE Environmental impact statement policy and wastewater management: a case study of Emerald Isle and Atlantic Beach

AUTHOR Robert Todd Rinck DATE OF COMPLETION May 1985

INSTITUTION Duke University, Durham, NC 27706

DEPARTMENT / PROGRAM School of Forestry and Environmental Studies

INDICATE APPROPRIATE CATEGORY:

☒ Master's Thesis Project ☐ Project, Paper, Article ☐ Doctoral Dissertation

THESIS ADVISOR Dr. Jack P. Royer

WHERE FULL THESIS IS AVAILABLE SFES Publications Office

This study examines the effects of the environmental impact statement (EIS), entitled "North Carolina Barrier Islands Wastewater Management," on local wastewater decisions. The incentives for municipalities to develop facilities and how an EIS acts as a policy instrument are studied. The Construction Grants Program was analyzed to determine program control, participation, funding, and project validation. Funding shortages in the Construction Grants Program and in North Carolina's Clean Water Bonds program have placed a greater burden of funding on municipalities. The EIS findings and recommended strategy for future barrier islands wastewater management are discussed. A case study was conducted to determine the effect of the EIS on the wastewater decisions of the two towns of Emerald Isle and Atlantic Beach. Because Emerald Isle is not presently in need of a wastewater facility, the effects of the EIS are inconclusive. On the other hand, the EIS process (if not its findings) had the effect of discouraging Atlantic Beach from participating in the Construction Grants Program by delaying 201 plan authorization and reducing available funding. Thus, the EIS may have negative environmental impacts because municipalities will be less willing to participate in the program as a result of the new conditions, and will not have their plans reviewed by EPA.

Environmental Education / Communication Project or Thesis Report Form

North American Association for Environmental Education

TITLE MODAL SALIENT BELIEFS TOWARD ENVIRONMENTAL ACTION STRATEGIES OF GROUPS DISPLAYING DIFFERING LEVELS OF ACTION BEHAVIOR

AUTHOR Robert J. Wilson DATE OF COMPLETION May, 1985

INSTITUTION Southern Illinois University - Carbondale

DEPARTMENT / PROGRAM Curriculum, Instruction and Media

INDICATE APPROPRIATE CATEGORY:

☐ Master's Thesis ☐ Project, Paper, Article ☒ Doctoral Dissertation

THESIS ADVISOR Drs. Harold R. Hungerford and Audrey N. Tomera

WHERE FULL THESIS IS AVAILABLE Morris Library, Southern Illinois University

The study's first purpose was assess the number and types of beliefs regarding six categories of environmental action of groups with either a high or low level of environmental action behavior. The second purpose was to measure the evaluative importances of the modal salient beliefs expressed by each group.

The measurement of the beliefs and behaviors for these individuals required the study to be divided into two phases. Individuals were randomly selected and randomly assigned to participate in either Phase I or Phase II. In Phase I, the solicitation of beliefs was accomplished. Participants were first given the Free Response Belief Inventory for Environmental Action (FRBI). This measure allowed individuals to express their beliefs about taking action. Upon its completion, individuals received the Behavior Inventory of Environmental Action: A One-Year History (BIEA). The BIEA was scored and these values used to separate respondents into high and low behavior groups. A frequency distribution of the beliefs for each group was made. Comparisons were made of the numbers and nature of the beliefs each group expressed.

In Phase II, the five most frequently expressed beliefs for both groups were placed into a second belief instrument, i.e., Modal Salient Belief Inventory for Environmental Action (MSBI). It measured the evaluative importance levels of the beliefs and was given to the second half of the originally selected sample. The BIEA was then administered and the scores obtained were used to separate respondents into high and low behavior groups. For each of the modal beliefs a mean evaluative importance level was calculated. Comparisons were made between the groups where the modal beliefs were held in common.

The results of the two phases indicated that large differences exist between the groups. Individuals in the high groups differed from the low group not only in the nature but also in larger number of beliefs expressed.

Environmental Education / Communication Project or Thesis Report Form

North American Association for Environmental Education

TITLE The motivations underlying the reforestation of nonindustrial private forestlands

AUTHOR Gregory James Meese DATE OF COMPLETION May 1985

INSTITUTION Duke University, Durham, NC 27706

DEPARTMENT / PROGRAM School of Forestry and Environmental Studies

INDICATE APPROPRIATE CATEGORY:

☒ Master's Thesis Project ☐ Project, Paper, Article ☐ Doctoral Dissertation

THESIS ADVISOR Dr. Jack P. Royer

WHERE FULL THESIS IS AVAILABLE SFES Publications Office

Sixty-five nonindustrial private forest (NIPF) owners who had recently planted seedlings in North Carolina were surveyed regarding the motivations underlying their forestry investments, and their use of reforestation investment tax credit and public cost-sharing programs. Results of the survey indicate that the primary motivation for forestland investment is the expectation of future profits with increasing land value, providing for heirs, and conservation also being important. Harvest revenues and personal savings were cited as the primary sources of investment funds, with landowner incentive programs being used extensively. Most landowners were aware of, and took advantage of, the investment tax credit available for forestry investments and cost-sharing programs. However, few landowners conducted a financial analysis of their investment, and few could give an estimate of their expected return.

Environmental Education / Communication Project or Thesis Report Form

North American Association for Environmental Education

TITLE POLITICAL IDEOLOGY AND HAZARDOUS WASTE DISPOSAL: A COMPARISON OF ATTITUDES BETWEEN FRESHMAN AND SENIOR BSU STUDENTS

AUTHOR ROBERT A. DYE DATE OF COMPLETION AUGUST 1984

INSTITUTION BALL STATE UNIVERSITY

DEPARTMENT / PROGRAM DEPARTMENT OF NATURAL RESOURCES

INDICATE APPROPRIATE CATEGORY:

☒ Master's Thesis ☐ Project, Paper, Article ☐ Doctoral Dissertation

THESIS ADVISOR CHARLES O. MORTENSEN

WHERE FULL THESIS IS AVAILABLE

The object of this study was to determine the current attitudes of Ball State University students toward hazardous waste disposal. A survey questionnaire was used to collect data on political affiliation and ideology, knowledge of the hazardous waste issue, and environmental attitudes. A total of 103 freshmen and 77 seniors returned usable questionnaires for an overall response rate of 49%. Computer analysis of returned questionnaires with Ball State University's S.P.S.S. statistical package served as the basis for answering six research questions and forming conclusions. It was determined that there were measurable differences in attitudes between freshmen and senior students. While both groups expressed environmental concern, seniors were more knowledgable of the issues and more thoughtful in their choices. However, several indications were discovered that environmental concern in this survey group will probably not lead to political action.

BEST COPY AVAILABLE

Environmental Education / Communication Project or Thesis Report Form

North American Association for Environmental Education

TITLE "The Ratepayers' Revolt and the Washington Public Power Supply System Crisis"

AUTHOR Wayne H. Sugai DATE OF COMPLETION Jan 1985

INSTITUTION University of Washington

DEPARTMENT / PROGRAM Political Science

INDICATE APPROPRIATE CATEGORY:
☐ Master's Thesis ☐ Project, Paper, Article ☒ Doctoral Dissertation

THESIS ADVISOR Prof. Kai N. Lee

WHERE FULL THESIS IS AVAILABLE University of Washington Library System

Analyzes environmentalist conflict in the Pacific Northwest over utility development in the Hydro-Thermal Power Program (HTPP), centering on the nuclear construction program of the Washington Public Power Supply System (WPPSS). Provides a detailed account of the series of anti-nuclear public initiative campaigns in Washington between 1976 and 1981, integrating developments at both the national and local levels bearing on mass opposition to commercial development of nuclear power. Describes the political factors prompting passage of the 1980 Northwest Regional Power Planning and Conservation Act. Argues that although the 1982 statewide ratepayer unrest in Washington was precipitated by the termination of WPPSS Nuclear Projects 4 and 5 in January 1982, social instability was fomented during the earlier Initiative 394 campaign the previous year. Concludes that the ratepayer unrest was economically based and provides evidence of prolonged rate escalation and high unemployment to support the claim. Approximtely 650 pages, with tables.

Environmental Education / Communication Project or Thesis Report Form

North American Association for Environmental Education

TITLE A Review of Archaeological Significance, Sites, and Legal Considerations, with an Evaluation of Perceptions Among New York Archaeologists

AUTHOR Robert Sanford DATE OF COMPLETION May 1984

INSTITUTION SUNY College of Environmental Science and Forestry

DEPARTMENT / PROGRAM Graduate Program in Environmental Science

INDICATE APPROPRIATE CATEGORY:
☒ Master's Thesis ☐ Project, Paper, Article ☐ Doctoral Dissertation

THESIS ADVISOR James F. Palmer

WHERE FULL THESIS IS AVAILABLE CESF, F. Franklin Moon Library, Syracuse, NY 13210

The purpose of this document is to present an overview of issues, perspectives, problems, and definitions related to archaeological resource perceptions and evaluation. In order to accomplish this, the professional literature is examined and presented in relationship to a discussion of key issues. An attempt is made to present a number of components that contribute to how archaeological resources are perceived and consequently, managed and evaluated. In order to examine how these key issues are perceived in New York State, an opinion survey has been prepared and administered to persons and groups in New York who are involved in archaeological evaluations, management, or other activities affecting archaeological resources in New York.

(Continued on next page)

BEST COPY AVAILABLE

Specific issues involving archaeological resources have been discussed in the literature, however, rarely have archaeological resources been presented in a holistic manner as being environmental resources. As a consequence, it is the intention here to evaluate and synthesize the key issues regarding archaeological resources that have been discussed and to present them in conjunction with other factors involving archaeological resources, such as legal requirements and organizational responsibilities. The result of this effort is to arrive at an understanding of the general perceptions regarding issues involving archaeological issues and regarding the archaeological resources themselves from an environmental resource perspective.

The following chapters discuss archaeological significance, concepts regarding archaeological sites, issues in archaeological resource preservation, issues within the archaeological profession, legal aspects regarding archaeological resources, and the results of a survey that relates all of the above items. Conclusions regarding perceptions are presented along with recommendations for further evaluation. In addition, suggestions are made for policy implementation of the management of archaeological resources as an aspect of the physical and cultural environments.

Environmental Education / Communication Project or Thesis Report Form

North American Association for Environmental Education

TITLE Revision of the Perceived Environmental Control Measure

AUTHOR Cynthia M. Sanford DATE OF COMPLETION May 1985

INSTITUTION University of Wisconsin-Stevens Point

DEPARTMENT / PROGRAM College of Natural Resources

INDICATE APPROPRIATE CATEGORY:

☒ Master's Thesis ☐ Project, Paper, Article ☐ Doctoral Dissertation

THESIS ADVISOR Drs. Michael Gross, Richard Wilke and Randall Champeau

WHERE FULL THESIS IS AVAILABLE Learning Resources Center, UW-Stevens Point

It has been proposed that knowing about an individual's locus of control can help predict his/her potential for taking environmental action. The purpose of this study was to construct a locus of control instrument which could be used to measure an individual's perceived locus of control for taking environmental action in generally stated situations. The locus of control instrument created was modeled after Champeau's (1982) Perceived Environmental Control Measure. The instrument created was entitled the Revised Perceived Environmental Control Measure (RPECM) and was tested for evidence of reliability and validity.

The final instrument was comprised of 45 items in three locus of control belief orientations: 1) Internal (I); 2) Powerful Others (P); 3) Chance (C). These three belief systems were in turn applied equally across five categories of environmental action: 1) Ecomanagement; 2) Economic Action; 3) Legal Action; 4) Political Action; 5) Persuasive Action. Subjects were asked to respond to the RPECM statements as if they actually pertained to their lives. Participants in this study included sample populations of college students.

Results of the study support the proposed relationship between locus of control and environmental action taking behavior. The majority of subjects perceived themselves as having some personal control over the generally-stated environmental concerns. However, powerful others and chance were also identified as agents having some control over the potential for environmental action. Subjects showed a tendency to feel most in control with ecomanagement practices and least in control in the case of political action.

The RPECM exhibited evidence of reliability, content validity and construct validity. It contains a set of subscales which show potential for diagnosing environmental action taking behavior and for evaluating the effectiveness of environmental education curricula.

BEST COPY AVAILABLE

EE PHILOSOPHY, ADMINISTRATION & OTHER

Environmental Education / Communication Project or Thesis Report Form

North American Association for Environmental Education

TITLE The Development of Theoretical and Practical Aspects of Program Evaluation for Program Improvement in Environmental Education

AUTHOR Thomas J. Marcinkowski

DATE OF COMPLETION July 13, 1985

INSTITUTION Southern Illinois University at Carbondale

DEPARTMENT / PROGRAM Department of Forestry

INDICATE APPROPRIATE CATEGORY:

☒ Master's Thesis ☐ Project, Paper, Article ☐ Doctoral Dissertation

THESIS ADVISOR Dr. Paul Yambert

WHERE FULL THESIS IS AVAILABLE Institution, Department, Advisor, Author

The problem area under investigation in this study was the status of program evaluation in the field of Environmental Education (EE). Within this area, four specific conditions were identified, including the lack of an adequate model of program evaluation, and the lack of up-to-date program evaluation procedures and materials. These conditions were seen as problematic given apparent incongruities between recognized mission and goal statements for EE, and the level of program achievements as documented in national and state-level studies.

The purposes of this study were: (1) with respect to the first condition, to develop a theoretical model of program evaluation for use in EE, and (2) with respect to the second condition, to develop a set of program evaluation procedures and materials for use in EE.

The methods used in the study followed a four phase sequence: (1) an extensive review of the literature on evaluation and change, and on EE, (2) the selection, adaptation, and further development of relevant ideas found in that literature, (3) an initial review of the materials by local EE professionals, with subsequent revision of them, and (4) a final review of the materials by a jury panel of select EE professionals, with subsequent revisions of them. This sequence was used in the development of a list of criteria, and in the development of procedures and materials.

With respect to the development of a theoretical model, four constructs found in the literature were adapted for use. These included: (1) the 'Program Improvement' purpose for evaluation as the basic orientation for a theoritical model, (2) the Phi Delta Kappa National Study Committee's (1971) mediating definition as the guiding definition for program evaluation, (3) the 'Structure of Evaluation Design' developed by Stufflebeam (1973) as the operaticnal definition of program evaluation, and (4) the 'Proactive/Interactive Change Model' (Zaltman, Florio, and Sikorski, 1977) as a guide to the program improvement process served by program evaluation.

These models served as the basis for developing the practical aspects of program evaluation within the study. These practical aspects included: a set of criteria; two checklist-type instruments; procedures for summarizing, synthesizing, and evaluating collected data; procedures for identifying program problems and facilitating remedial decision-making; and proceudres for interpreting the developed procedures and materials to potential users.

The researcher concluded that the procedures and materials were in need of further development. As a result, specific recommendations were posed, focusing on the development of a more valid, reliable, and flexible set of program evaluation procedures for use in EE. In addition, further research and development efforts were recommended to help alleviate the problematic evaluation conditions still facing the field as a whole.

BEST COPY AVAILABLE

Environmental Education / Communication
Project or Thesis Report Form

North American Association for Environmental Education

TITLE A Methodology for Analyzing Written Evaluations of the Jennifer M. McSweeney Land Use Planning Course for Local Officials

AUTHOR Joseph G. Noethlich DATE OF COMPLETION March 1985

INSTITUTION School of Natural Resources, The Ohio State University

DEPARTMENT / PROGRAM

INDICATE APPROPRIATE CATEGORY:
☒ Master's Thesis ☐ Project, Paper, Article ☐ Doctoral Dissertation

THESIS ADVISOR John F. Disinger

WHERE FULL THESIS IS AVAILABLE OSU School of Natural Resources, Columbus OH 43210

A type of semantic content analysis was used to analyze and interpret written evaluations of attendees from offerings of the Land Use Planning Course for Local Officials (LUPC) in March 1983 and November 1984. The results of the analysis performed provided information which the Ohio Department of Natural Resources, the Ohio State University's School of Natural Resources, and the Ohio Cooperative Extension Service (co-sponsors of the LUPC) could use to evaluate and improve the course.

The written evaluations of atendees were analyzed by the number and type of thought segments (ts) provided in each response. Results of the analysis were interpreted for sessions of the LUPC separately and collectively. One session from each of the two LUPCs consistently received the most support from attendees; another session consistently received the least. In general, attendees showed more support for the 1983 LUPC, which was comprised of sessions with a general focus, than they did for the 1984 LUPC in which the sessions had a more specific focus.

Environmental Education / Communication
Project or Thesis Report Form

North American Association for Environmental Education

TITLE A Philosophy of Environmental Education and Its Implementation in the Orinda Union School District

AUTHOR Toris A. Jaeger DATE OF COMPLETION June, 1985

INSTITUTION California State University, Hayward

DEPARTMENT / PROGRAM Teacher Education Department/Curriculum

INDICATE APPROPRIATE CATEGORY:
☒ Master's Thesis ☐ Project, Paper, Article ☐ Doctoral Dissertation

THESIS ADVISOR Dr. Esther Railton

WHERE FULL THESIS IS AVAILABLE Walter J. McHugh Library, Teacher Education Library, Cal. State Univ., Hayward

This study defines a philosophical background of the environmental education movement and a description of how it has been implemented in the Orinda Union School District, located in the San Francisco Bay Area.

This study provides a description of environmental education programs which began in the early 1970's and continues to the present. Seven Environmental Living Programs are presented for grades kindergarten through six. The three main goals of these programs are: to develop a positive environmental ethic; recognize and understand the interrelationship between humans and their environment; and develop a concern for the quality of all life.

This study also provides recommendations for the continued maintenance of the environmental education programs.

BEST COPY AVAILABLE

Environmental Education / Communication
Project or Thesis Report Form

North American Association for Environmental Education

TITLE Paradigmatic Change and Environmental Education: Toward New Societal Foundations

AUTHOR Douglas K. Bogen DATE OF COMPLETION

INSTITUTION Cornell University

DEPARTMENT / PROGRAM Education/Science, Mathematics, and Environmental Education

INDICATE APPROPRIATE CATEGORY:

☐ Master's Thesis ☐ Project, Paper, Article ☐ Doctoral Dissertation

THESIS ADVISOR Richard B. Fischer

WHERE FULL THESIS IS AVAILABLE Olin Library, Cornell University, Ithaca, New York

This thesis is concerned with the conditions and processes of revolutionary conceptual change on the metaphysical as well as societal levels. It presents a theory of social change adapted from the new philosophy of science and applied to the broad problems related to the world environmental crisis. A consideration of the history of western thought presents us with a cyclic pattern of change that puts our current societal problems into a more comprehensible context. The ramifications of this theory for a necessary restructuring of society along ecological and sustainable lines are suitably vast and profound. Its importance for environmental education is that it provides for the identification of a coherent and profound framework for ideological commitments, in contrast to the disagreement and multiplicity of outlooks that currently characterize the field -- as well as society as a whole.

The focal point of this work is the concept of a paradigm -- a model of thought, or worldview, that is accepted and applied by individuals and by societies to make sense of their worlds. Used on a metaphysical level, the paradigm concept gives meaning to a broad constellation of thoughts, beliefs, and attitudes that guide one's activities in life on the individual level, and which guide cultural standards and goals on the societal level.

The paradigm concept is applied to the developmental pattern of western civilization and is used to clarify and distinguish varying societal aspirations through a cyclic process of "paradigm shifts." The current crises, environmental and otherwise, that our society currently faces are thus put in the context of a far-reaching transition in how we conceive of our place in the world. The "old" and the "new" paradigms that are seen as dominating prior to and beyond the current period of transition are described in general terms. Sociological research that identifies some of the avenues and extent of paradigmatic change in our society is then presented. Finally, this historical and philosophical pattern described is applied to the field of Environmental Education, serving to clarify the differing ideological commitments reflected in the field. Some recommendations are made for making more explicit use of the new paradigm through environmental education and for reconceptualizing the foundations and goals of environmental education by way of the new paradigm.

BEST COPY AVAILABLE

INDEX TO PAST VOLUMES

VOLUME VII (1984)

1. Site Analysis

Development of an Environmental Education Site Plan and Sample Programs for Use at Ward Acres Park by David P. Schofield...p. 1

Development Plan for the Seawell Elementary School - Chapel Hill High School Environmental Studies Area by Daniel R. Plonski...p. 1

Fox Lake: A Water Quality and Management Study by 21 Water Resources Management graduate students...p. 2

A Preliminary List of Plants of Special Concern in Pennsylvania's Glaciated Section of the Appalachian Plateau Province by Paulette Johnson...P. 2

The Natural History of Washington Island (Wisconsin): Studies in Wildflower Ecology, Environmental Education and Resource Protection by Susan M. Sander...p. 3

Natural Resource Management Plan and Program for YMCA Camp Tockwogh, Worton, MD by Cynthia Ann Homsher...p. 3

The Water Quality of Tobyhanna Creek (PA) With Considerations For Recreation by Karol A. DiPasquale...p. 4

A Wholesale Nursery Design for the Austin State School, Austin, Texas by Kaye Vivienne Jenkins...p. 4

2. Parks & Camps: Users & Interpreters

Environmental Interpretive Centers of the United States: An Ethnographic Study by Ervand Melden Peterson...p. 5

An Assessment of Visitor Interests and Evaluation of Conducted Interpretive Programs of Everglades National Park by Paul H. Motts...p. 6

An Investigation of Selected Predictors of Overt Responsible Environmental Behavior by Archibald Peterson Sia...p. 18

Reducing Public Opposition to Hazardous Waste Facility Siting by Cecil C. Cross III...p. 19

Some Relationships Among Knowledge, Locus of Control, Perceived Importance, and Perceived Personal Responsibility Regarding Environmental Problems by James Powhatan Hamilton...p. 19

Wildlife Problems, Human Attitudes and Response to Wildlife in the Syracuse, New York Metropolitan Area by Michael A. O'Donnell...p. 20

6. EE Philosophy, Administration & Other

Towards a Humanistic Response to the Social Pathology of Nuclearism-Educating for Peace within the Behavioral-Empowerment Approach by Charles Barbieri...p. 21

Appreciation of Human Trophic Relationships: Alternative Ways to Increase Public Awareness of Nutritional Ecology by Jeanne Louise Harrison...p. 22

A Program of Public Information and Public Participation for Improved Black Bass Management by Bernard J. Ziolkowski...p. 22

Community Development Users' Guides of Environmental Laws Affecting Hud Projects by Holly Farnsworth Reid...p. 23

Impacts of Abandoned Surface Coal-Mined Lands on the Local Population in Southwestern Indiana by Fenner O. Omolo...p. 24

The Impact of Urban Amenities Upon the Location of Selected Corporate Headquarters and Research and Development Facilities in Central Ohio by Julie E. Snider...p. 24

The Mercury Pollution of High Rock Lake: A Case Study Analysis of Policy Decisions with Implications for Environmental Mediation by Edgar Miller...p. 25

Interpretive Booklets and Activities for the YMCA Outdoor Center by Janice C. Heling...p. 6

Environmental Education at Camp Durant: A Pilot Project by Beth E. Wilson...p. 7

3. Pupil-Centered Studies

Environmental Perceptions and Behaviors of University Students Enrolled In a Freshman Level Environmental Problems Course by Dan J. Sivek...p. 8

The Unity of Learning: A Systems Perspective on Environmental Education by Pamela J. Puntenney...P. 9

Integrating Children with Disabilities through Cooperative, Experiential Programs and Adaptable Environments by Gina M. Moreland...p. 10

The Presentation and Evaluation of a Community Transportation Curriculum Module: International Environmental Education by Paul Taylor Zeph...p. 10

A Survey of Facets of Ecology Teaching in Illinois General Biology Classrooms by Brenda L. Barber...p. 11

4. Teacher-Centered Studies

A National Survey of Curriculum Needs as Perceived by Professional Environmental Educators by Gertrude L. Volk...p. 12

Environmental Perceptions and Behaviors of Illinois Soil and Water Conservation District Directors by Michael T. Harrington...p. 13

The Development of a Museum Education Curriculum for Teachers by Heather Hastings...p. 14

The Sangamon River Valley: A Sense of Place by Virginia R. F. Wood...p. 14

Worksheet Use in Elementary Science and Environmental Education by Rebecca Lash...p. 15

5. Citizen-Centered Studies

An Analysis and Synthesis of Research on Responsible Environmental Behavior by Jody M. Hines...p. 16

An Investigation Into Environmental Activism by Mark A. Larson...p. 17

VOLUME VI (1983)

1. Site Analysis

A Description and Natural Resource Inventory of the Labrador Hollow Unique Area, by Jane A. Offringa...p. 3

Guide Handbook: Oliver H. Kelly Farm and Interpretive Center, Elk River, Minnesota, by Judith A. Meyerdierks...p. 3

Proposed Management Options for the Amelioration of Recreational Impacts on Coyote Gulch, Glen Canyon National Recreation Area, by Mary Barbara Carey...p. 4

2. Parks and Camps: Users and Interpreters

Audience Attention as an Indication of the Quality of an Interpretive Presentation on a Nature Trail, by Kenneth LaVerne Hensley...p. 5

Determination of Differences Regarding Motives for Camping, Management Preferences, and Preferences for Programming Expressed by Experienced and First-time Campers at Pinchot and Prince Gallitzin State Parks in Pennsylvania, by Robert David Griffith...p. 5

The Effects of Canoe Tripping on the Self-concepts of Campers in a Long-term Therapeutic Wilderness Camp, by Keith E. Paulk...p. 6

Nonformal Environmental Education in Natural Resources Management: A Case Study in the Use of Interpretation as a Management Tool for a State Nature Preserve System, by Edward C. Olson...p. 6

3. Media Communications

The Effectiveness of Communication Forms Used by the Soil Conservation Service and Soil and Water Conservation District: A Duel Perspective, by Sylvia J. Wong...p. 7

Energy and the Environment, by Karen Kirkman...p. 8

Methods of Reinforcement and Visitor's Attention Span at an Interpretive Exhibit, by Frederic Hom...p. 8

(Volume VI 1983 continued)

Preferences for Promotional Materials Used by a Recreation and Park Agency, by Sheri Lee Sykes...p. 9

The Relationship Between Attention Span, Information Retention, and Satisfaction Using Various Methods of Reinforcement at an Interpretive Exhibit, by Jane Miller Horvat...p. 9

The Use of National Park Planning Workbooks for Citizen Participation: Enhancing Effective Communication, by Deborah Anne Simmons ...p. 10

A Content Analysis of The Conservationist: A Post Earth Day Perspective, by Blaise A. Corcoran...p. 11

4. Pupil-Centered Studies

An Assessment of Ecological Knowledge Gain Resulting from a Resident Environmental Education Program, by Leslie Marie Cancilla...p. 12

The Implementation and Evaluation of Microcomputer Simulations in a College Level Environmental Education Course, by John F. Schar ...p. 13

5. Teacher-Centered Studies

The Effect of Three Training Methods on the Teaching Preparation of Counselor-Teachers in a Resident Environmental Education Program, by Susan Lynette Johnson...p. 14

A National Survey of Curriculum Needs as Perceived by Professional Environmental Educators, by Trudi L. Volk...p. 15

Process-oriented Training for Camp Counselors: Its Effects on Group Cohesion and Job Performance, by Harry R. Buchanan...p. 16

Safety in the Chemistry Laboratory, by Thomas W. Woodruff...p. 16

Values and Environmental Education: A Workshop Model for Training Teachers and Leaders, by Deborah S. Yandala...p. 17

The Use of the Arts in Interpretive Programming, by Susan Dale Alexander...p. 18

6. Citizen-Centered Studies

An Environmental Attitude Survey: Costa Rica, by Jo Ann Myer Valenti ...p. 19

Environmental Action and Locus of Control: Validation of the Perceived Environmental Concern Measure, by Jonathan Tulman ...p. 20

(Volume VI 1983 continued)

Environmental Perceptions and Behaviors of Graduate Students and Professionals Working With Cooperative Wildlife Research Units, by Michael A. Squillo...p. 21

Local Attitudes Toward Nonstructural Floodplain Management in North Carolina, by John H. Lohnes...p. 21

The Sand Lakes Quiet Area Controversy: Citizens Involved in Environmental Dispute Management, by Bonnie Anderson...p. 22

7. Resources, Administration and Others

An Assessment of Environmental Education in West Virginia, by Devra Deems...p. 23

An Economic Analysis of Hunter Education in North Carolina, by Thomas Dennis Peterson...p. 23

Forest Fire Frequency in a Central Eastern Washington Pinus Ponderosa Stand, by Michael Joseph Brown...p. 24

Measuring the Influence of Vegetation of Solar Retrofitting an Urban Neighborhood, by Kim Mills...p. 24

A Program Development and Evaluation Model Derived From Nature Centers With School Programs, by Janet Lynn Wolanin...p. 25

Valuing the Environment: New Trends in Legislation and Economic Theory, by Susan Katherine Parry...p. 26

Virginia: Residential Solar Thermal Energy Policies and Recommendations, by Randall E. Meyers...p. 26

A Study of Vegetative Ecology of Burley Mountain in the Southern Cascades of Washington, by William C. Cunha...p. 27

Visual Assessment of Children's and Environmental Educators' Urban Residential Preference Patterns, by Augusto Quinones Medina...p. 27

An Investigation of Noise as an Environmental Hazard, by Lynn Phillips Grace...p. 28

VOLUME V (1982)

1. Site Analysis

Ecological Analysis and Management Plan for the Salisbury Nature Study Area in Rowan County, North Carolina, by Jeffrey C. Babcock...p. 3

An Interpretive Prospectus for the Robert Scruggs House, Cowpens National Battlefield, S.C., by Frederick H. Boyles...p. 3

Mud Mountain Sam Project Resource Management Plan, by Kenneth G. Knouf...p. 4

A Framework for Monitoring Recreational Opportunities as a Function of Land Use, by Steven C. Bennett...p. 4

Baseline Floristic Study: The Yakima Rim Skyline Trail, by Sharon Kay Gordon ...p. 5

The Erie Extension Canal Recreation Area--A Developmental Plan, by James David Bigley, Jr. ...p. 5

2. Parks and Camps: Users and Interpreters

Familiarity and Adaptation: A Study of Family Attendance at Interpretive Activities, by Sam H. Ham...p. 6

The Use of Time by Organized Tour Groups, by Ellen L. Wenderoth...p. 7

The Urban Environmental Center, by Lori D. Mann & Karen A. Rutledge...p. 7

The Development of Self-guided Materials for a Nature Conservancy Sanctuary, by Beth G. Silverman...p. 8

An Organizational Plan for the Development of a Nature Center at Haywood County Hospital, North Carolina, by Judith A. Hutchinson...p. 8

School Camps and Environmental Education in the Inland Northwest: A Descriptive Analysis, by Randall D. Langseth...p. 9

3. Media Communications

Effectiveness of Interpretive Signs in Increasing the Environmental Knowledge of Campers, by Nevin Burt Webster, Jr. ...p. 10

The Effectiveness of a Cartoon-Illustrated Interpretative Brochure on the Enhancement of Campers' Knowledge of Rules and the Decrease in Rates of Rule Violation per Campsite, by Thomas P. Gallup...p. 11

Communication Preferences Related to Involvement Levels of Wisconsin Bong Area Pheasant Hunters, by Rebecca Jean Heimark...p. 11

(Volume V 1982 continued)

A Consumer-Oriented Approach to Interpretive Program Planning for Birding, by William Joseph Hobson, Jr. ...p. 12

Guidelines in Trail Signing, by Carl Dixon Sherman...p. 12

4. Pupil-Centered Studies

Changes in Students' Attitudes Towards Conservation Resulting From Outdoor Education: A Case Study, by Joseph K. Tufuor...p. 13

The Effects of Teaching Conservation of Resources to Primary Age Children, by Evelyn Cormier...p. 14

Development and Evaluation of an Environmental Education Curriculum, by Deborah A. Simmons & Christine McElroy...p. 14

The Effectiveness of an Outdoor Resident Living Experience on Attitude Change of Upper Elementary Grade Level Students in the Area of Environmental Education, by John T. Conroy...p. 15

A Study of the Content of Population Education in the United States, by Arti Laroia ...p. 15

A Comparison of Environmental Attitudes Among International and American Students Studying in the United States, by Sanghoon Lee...p. 16

Industrial Arts Activities for Nature Trail Construction, by Michael P. Schlein ...p. 16

A Comparative Study of the Attitudes of Fifth and Sixth Graders in Selected Outdoor Activities, by Cynthia A. Jenkins...p. 17

Environmental Education Through Use of Children's Literature in the Primary Grades, by Gayle D. Prager...p. 17

Teaching Outdoor Science and Environmental Education Using the Station Approach, by Mike Schneider...p. 18

The Development of Instructional Materials for Teaching About Selected Northeast Wisconsin Game Birds and Their Habitat to Elementary Students Utilizing a Natural Area, by Joann M. Schmitt & Henry J. Schmitt...p. 18

An Environmental Curriculum Guide Emphasizing Children's Literature and Art, K-3, by Keiko Kochi Aresh...p. 19

5. Teacher-Centered Studies

Developmental Variables Affecting Environmental Sensitivity in Professional Enviromental Educators, by Nancy J. Peterson...p. 20

A Study of Teacher-Sponsored Environmental Education Inservice Workshops, by Marylynn Burkhardt Kaake...p. 21

Environmental Lessons for Substitute Teachers, by Mary C. Cedarholm...p. 21

Volunteer Staff Training Programs in Interpretive Centers, by Barbara A. Middleton ...p. 22

Changes in Student-Teacher Perceptions Following a Residential Outdoor Program, by David John Bateson...p. 22

Toward a Comprehensive Strategy for Environmental Values Education, by Micahel J. Caduto...p. 23

Winter--A State of Mind, by Michael L. Madden...p. 24

6. Citizen-Centered Studies

Elitism and the Environmental Movement, by Barry Ingber...p. 25

An Investigation into Environmental Activism, by Mark A. Larson...p. 26

An Assessment of Intragroup Differences in Conservation Attitudes and Environmentalism, as a Function of Activity Involvement Among Fly Fishermen, by Merrill S. Katz...p. 27

Off-Road Motorcycle Management in Pennsylvania: A Preference Study of Management Policy Statements for Off-Road Motorcycle Use, by Dennis S. Rentschler ...p. 27

Environmental Literacy Training for Citizen Groups, by Bruce D. Sullivan...p. 28

Public Participation in the Development of Hazardous Waste Management Policy: A Sourcebook for Planning, by Lee A. Krohn and James J. McGough...p. 28

A Comparison of the Environmental Knowledge and Attitudes Between Disabled and Non-Disabled College Students, by Mark F. Herman...p. 29

The Surrogate Phenomenon: The Dangers of Substituting NEPAs Environmental Impact Assessment Process for an Effective Problem Solving Process, by James R. Stordahl...p. 29

Education and Its Role in the Diffusion of Passive Solar Technologies, by Nancy A. Nylen...p. 30

The Islands Trust: An Institutional Experiment in the Management of Scarce Natural and Social Resources, by Laura Kathryn Porcher...p. 31

Hazardous Substances in North Carolina: An Analysis of Public Perceptions, by James S. Mead et al. ...p. 32

How Preservation Efforts Affect Local Populations: An International Study of Communication, Conflict and Amelioration, by Mary L. Anderson...p. 32

A Critique of Public Involvement Mechanisms and Assessments: The Canadian Experience, by Beverly Jaffray...p. 33

7. Resources, Administration and Others

ource Separation As a Solid Waste Management Option: Four Case Studies, by Helen Roland...p. 34

Land Use Classification Terminology: Variation in Meaning and Implications for Public Policy, by Michael D. Bruder...p. 35

Snowmobiling in Minnesota: Growth and Government Response, by Walter Wieland ...p. 35

VOLUME IV (1981)

1. Site Analysis

The Design of a Self-guiding Interpretive Trail at Camp New Hope, North Carolina, by JoAnn Marie Roesler...p. 3

Developing School Sites Into Outdoor Classrooms, by Carol DeGroot...p. 3

Biophysical Inventory, Management Guidelines, and Environmental Education Program Development for Rose Creek Nature Preserve, by Edward C. Olson II...p. 4

Management Issues Pertaining to the Use of Northern National Parks: A Case Study of the Northern Yukon, by Louis Zivot...p. 4

An Interpretive Prospectus/Park Plan for Redcliffe Plantation, by Jeffrey P. McNeill ...p. 5

Hobcaw Barony Interpretive Conceptual Master Plan, by John D. McEachern...p. 5

An Interpretive Master Plan for the Grassland Nature Center: Grover Colorado, by Wendy Ann Walker...p. 6

A Plan to Increase Total Usage of a Developing Environmental Facility Based on Norrie Env'l Museum, by Carolyn Rutgers...p. 6

A Conceptual Development Plan for a Commercial Outdoor Education/Recreation Enterprise in the Adirondack Mountains of New York, by James W. Culp...p. 6

An Interpretive Prospectus for the Clemson University Experimental Forest, Clemson University, South Carolina, by Lynne R. Beeson...p. 7

2. Parks and Camps: Users and Interpreters

Participation and Nonparticipation in Interpretation: A Study of People, Places and Activities, by Gary Wayne Mullins...p. 8

A Study of User Patterns and Maintenance Guidelines for the Alum Cave Bluffs and Chimney Tops Trails, Great Smokey Mountains, by Thomas Hallman Fearrington, Jr. ...p. 9

Injuries and Illnesses in Outdoor Education: A Study of an Ohio Upper-Elementary Resident Outdoor Education Program, by Cheryl Ann Arnold...p. 9

An Assessment and Explanation of the Importance, Extent and Management of Vandalism in Urban Parks in Columbus, Ohio, by Sally M. Blower...p. 10

An Assessment of the Enjoyment and Interest Level for Senior Citizens in Sensory and Non-Sensory Interpretive Hikes, by Francis M. Brockmeyer...p. 10

Assessing Visitor Participation/Nonparticipation in Interpretive Activities Through Unobtrusive Measures, by Tamara Lynn Nelson...p. 11

Planning for Winter Recreation: A Case Study of Elk Island National Park, by William Marshall...p. 11

Evaluation of the Use and Effectiveness of Two Types of Non-personal Interpretive Media in Yellowstone National Park, by Doris B. Tai...p. 12

An Evaluation of the Impact of Visitor Orientation Procedures at Old Sturbridge Village, by Mary Leanoir Brydon-Miller...p. 12

A Public Relations Study of Law Enforcement at Shenandoah National Park, by John F. Bradberry...p. 13

Communication Messages on a Natural Resources Management Controversy, by Gail Gawenda...p. 13

3. Media Communications

Incorporation of Videotape in Pre Design Site Analysis for Urban Sites: A Case Study Prototype, by Felix H. Peronilla, Jr. ...p. 14

Comparison of Three Mass Media for Communicating Forestry Information to Young People, by Ross L. Tomlin...p. 15

The Response of a Resource Periodical to the Environmental Movement: A Content Analysis of American Forests, 1970-1978, by Carol A. DeWolf...p. 15

A Survey of Wis. Natural Resource Magazine Subscribers, by Kathryn Gebhardt Blackfield ...p. 16

4. Pupil-Centered Studies

The Development, Teaching, and Assessment of the Concept "Away" in Primary Grade Children, by Moira A. Gleason...p. 17

The Development of an Instrument to Measure Energy Use Attitudes Among Junior High School Students, by Lawrence Allan Morton...p 18

Internal Locus of Control as a Prerequisite to Environmental Action Taking: An Assessment of the Youth Conservation Corps, by Barbara Ann Miller...p. 18

An Autotutorial Approach to the Teaching of Water Quality At the Secondary Level Based on Planet and Kephart Philosophies, by Ronald Vander Velden...p. 19

A Study of Differences Between a Single Discipline Approach and an Interdisciplinary Approach in Teaching Environmental Education at the Middle School Level, by Elizabeth J. Page...p. 19

Content Analysis of Pictures Drawn by Preschoolers in Response to a Nature Interpretation Program, by Sara Lustbader...p. 20

5. Teacher-Centered Studies

Developing a Skilled Energy Workforce: The Integrated Training Experiences Concept, by Emily S. Buckman...p. 21

An Assessment of the School Zoo Field Trip, by Elizabethann Marshdoyle...p. 22

Issues in the Recruiting and Training of Volunteer Field Guides in a Public School Environmental Education Program, by Mary MacGinitie Ferm...p. 22

A Description of Program Goals of Selected Resident Outdoor Environmental Education Centers in the State of Ohio, by Dennis H. Wiegman...p. 23

Recreational Leadership and Adolescent Self-Concept Change in a Two Week Residential Camp Program, by David Michael Griffin...p. 23

Curriculum Foundations for Naturalist Training: A Descriptive Study, by James C. Shuman...p. 24

6. Citizen-Centered Studies

An Investigation of the Relationships Between Perception of Self and Perception of an Environmental Challenge--The Energy Situation, by Linda E.W. Weaver ...p. 25

A Survey of Visitor Knowledge of Urban Mammals in Two Montgomery County, Maryland Nature Centers, by Julie Ann Melvin & John Michael Baines...p. 26

An Educational Program to Prepare Citizens for Participation, by Linda-Jo Schierow ...p. 26

Policy Implications Derived From a Coorientational Evaluation of the Communications Environment of a Natural Resources Agency and Its Citizen Clientele, by John N. Trent...p. 27

Reclaiming Onondaga Lake: The Role of Community Attitudes, by Richard E. Vertigan ...p. 28

A Study of Land Use and Preservation With Emphasis on the Feasibility of Maintainence of Open Space in the Piedmont Triad Region of North Carolina, by Holly Cullum Walker ...p. 28

Richland County Farmers' Perceptions of Non-Point Source of Pollution, by Kurt W. Gutknecht...p. 29

An Investigation of the Valuative Components of Attitudes Related to the Concept of Nuclear Power, by Alfred J. Girondi...p. 29

A Citizen's Guide to the Use of Transferable Development Rights in the New Jersey Pinelands, by Victoria Leigh Johnston...p. 30

Lake Associations as Environmental Groups: A Study of the Lake Associations of Genesee County, Michigan, by Christopher N. Hull...p. 30

Education for Energy and Rural Development in Thailand, by Cynthia A. Lowry...p. 31

7. Resources, Administration and Others

The Development and Application of Program Materials for the Urban Park and Recreation Recovery Program, A Federal Recreation Grants-in-Aid Program, Heritage Conservation and Recreation Service, by Runore C. Wycoff...p. 32

A Survey of the Current Use of Information and Education Within Natural Resource Management Agencies, by Robert R. Mindick...p. 33

Establishing Criteria for Comprehensive Planning of Environmental Education Programs, by Thomas J. Marcinkowski...p. 33

Mountain PLAY (Packet for Learning About Your Mountain), by Theresa Marie Carroll ...p. 34

An Evaluation Research Proposal for a Public Information Campaign on Urban Forest Management, by Hernando V. Gonzalez II...p. 34

The Environment Conservation Authority 1970-1977: An Assessment and Analysis, by Angela Clark Vuchnich...p. 35

Approaches and Methodologies for Environmental Impact Analysis, by Daryl A. Mikalson ...p. 35

VOLUME III (1980)

1. Site Analysis

A Guide to Selected Natural Sites for Day Field Trips--San Francisco Bay Region, by Beverly Jane Hawley...p. 3

Educational Survey of Mendonca Ranch, East Bay Municipal Utility District, by Paul F. Collett...p. 3

An Interpretation Concept Plan for Cold Lake Provincial Park, by W.J. McMillan ...p. 4

West End Park, by P. Bond...p. 4

Nose Hill: A Resource Study, by B. Edwards...p. 4

An Interpretive System for the Banff Mall: A Proposal, by R. Ashburner...p. 5

Management of Vegetation, Wildlife and Recreation in the West Block, Cypress Hills Provincial Park, Sask., by E.G. McGregor...p. 5

Kananaskis Valley Village, by R. Helton...p. 5

A Guide to Designing Accessible Outdoor Recreation Facilities, by David E. Jasperse ...p. 6

Survey of Bicycle Trail Potential in Uwharrie National Forest, by Karen S. Sullenger

Establishing a School Nature Area in an Urban Environment, a Guide for Teachers, by Janice E. Oliver...p. 7

Recommendations for the Design of an Outdoor Nature Area at Willow Creek School, by Gail A. Brekke...p. 7

A Decision-Making Process for Analyzing Wilderness Campsite Resource Impact in Kejimkujik National Park, by L.D. Clarke...p. 8

Resource Inventory and Management Plan for the Nyika National Park, Malawi, by Thomas A. Mill...p. 8

Developing Curriculum for the Outdoor Nature Center, by Robert E. Allen...p. 9

A Proposed Master Plan for an Environmental Education Center at Sugar Pine Point State Park, Lake Tahoe, by Gerald E. Bishop...p. 9

A Proposal for a Trail Planning Methodology: A Case Study: The Great Divide Trail, by B. Deeg...p. 10

River Interpretation: Development of an On-Water Trail, by Fred J. Wooley...p. 10

An Evaluation of Forest Protection Policies Concerning Spruce Budworm (Choristoneura Fumiferana (Clem.)) in the National Parks of the Maritimes, by Richard E. Davies...p. 11

Planning for Urban Wildlife: A Method and Its Application to Fish Creek Provincial Park, by J. Van Camp...p. 11

2. Parks and Camps: Users and Interpreters

An Economic Evaluation of the Wildland Recreation Program in the Bathurst Pilot Project, by Gwendolyn S. McKay...p. 12

An Evaluation of Three Nature Interpretation Techniques, by Patricia A. Deane ...p. 13

A Study of Camping Objectives of Mennonite Organized Resident Church Camp Directors, Campers, and Parents in Comparison to Spahn's (1958), by Anne B. Lehman...p. 13

The History of the Hayward Area Shoreline Environmental Education Project, by Constance Edwards...p. 14

(Volume III 1980 continued)

Developing an Interpretive Booklet..Porcupine Mts. State Park, by Mark R. Peterson ...p. 14

The Relationship of Satisfaction to Visitor Activities in a Park Setting, by Stephen Murray Holland...p. 15

Motive, Management Preferences, and Perceptions of Crowding of Backcountry Hiking Trail Users in the Allegheny National Forest of Pennsylvania, by Curtis S. Bowley ...p. 15

Banff: Visitor Activities and Regional Growth, by Donald W. Irwin...p. 16

Management of Visitor Use at Inglewood Bird Sanctuary, by Judith Larkin...p. 16

Interpretation in the Urban Natural Park, by B. McMillan...p. 17

Visitor Response to Interpretation at Selected Historic Sites, by Lucinda Lou Irwin ...p. 17

Three Environmental Living Curriculum Models, by Warren Arnold...p. 18

Fine Arts Summer Resident Camp Resource Guide, by Ted A. Brekke...p. 18

The Zooseum: An Integrated Institution for the Future, by Jerome E. Freilich...p. 19

A Basis for Interpretive Planning: The Demographic and Behavioral Characteristics of Visitors to the Eleven Point National Scenic River, Missouri, by Woodward Scott Bousquet...p. 19

The Environment of Small Residential Care Facilities, by Caryl Morton...p. 20

3. Media Communications

An Analysis of the Relationship Between the National Environmental Policy Act of 1969 and Coverage of Environmental Issues in Two Newspapers From 1962-1977, by Daniel Joseph O'Meara...p. 21

A Slide-tape Program Introducing the San Francisco Bay National Wildlife Refuge, by Fred LaDon Taylor...p. 21

Towards Improved Communications Between Grassroots Environmental Activists and the Press, by Walter E. Winans...p. 22

A Readership Survey of the Candid Conservationist, by Frederick J. White...p. 22

An Evaluative Comparison of Single and Dissolve Slide Projection Techniques, by Thomas Arthur Miles...p. 23

Educational Effectiveness of Interpretive Displays, by Michael A. Chemsak...p. 23

Research Proposal for Urban Forestry Campaign, by Hernando Gonsalez II...p. 24

4. Pupil-Centered Studies

Environmental Education Through Camping for the Inner City Schools, by Margaret Bradford...p. 25

Effects of an Environmental Studies Curriculum on Seventh and Eighth Grade Volunteers, by Melva Rush Hahn...p. 25

Effects of Audio-Visual Presentations on Environmental Awareness, by Douglas J. Glasenapp ...p. 26

Evaluating Educational Experiences: A Proposed Theoretical Model and Experimental Analytic Instruments, by Duane Robert Pierson...p. 26

Curriculum Guide in Outdoor Education for Oakland Diocese Elementary School Systems, by M.L. McElhiney...p. 27

The Development of a Curriculum for High School Students on a Backpacking Trip Through the Sierra, by Norman Loofborrow...p. 27

The Influence of an Outdoor Environmental Residential Experience on Attitudes, by Flora Eileen Bozzone...p. 28

Outdoor Activities for Seventh Grade Remedial Mathematics Students, by Wilda Bannister Forde...p. 28

An Investigation of the Effectiveness of Project Learning Tree at Lincoln Middle School, Alameda, California, by Richard Reid...p. 29

The Development of a Primary Grade Curriculum for the Playground Environment, by Jackie Gilmore...p. 29

The Garfield Elementary School Environmental Education Experimental Program, by Clovis Long...p. 30

Assessing Marine Environment Awareness of High School Students, by Larry W. Chin ...p. 30

Approaching Outdoor Education in a City Setting, by Billie Tinsley...p. 31

A Study of Moral Judgment, Values, and Locus of Control Development in Students of Environmental Education, by Kimberley Heimsath...p. 31

An Environmental Living Program on a Pioneer Homestead for Fourth and Fifth Graders, by Carol Place...p. 32

The Isolate in Sociometrically Designed Groups at Resident School Camp, by Maile White...p. 32

A Pilot Study Measuring Pre- and Post-Test Results of a Cognitive Test for Environmental Education, by Roberta M. Schane...p. 33

The College Park High School Earth Science Camping Program, by Gary Passey ...p. 33

Ways to Approach Outdoor Education With Grades One Through Three, by Erma Owens ...p. 34

Effect of an Environmental Social Science Class on the Values of Urban Students, by Frances Tomasko...p. 34

Student Attitude Change as a Result of the Presentation of Materials Representing Various Opinions on Strip Mining, by Terry L. Wilson...p. 35

The Effect of Process Instruction on Problem Identification Skills in Environmental Education, by Gertrude L. Volk...p. 35

The Effect of an Environmental Education Course on Student Behavior Patterns, by Greta Gangloff...p. 36

Experiences Related to Oceanic Knowledge and Attitudes of Tenth Grade Students in Virginia, by Rosanne White Fortner...p. 36

5. Teacher-Centered Studies

Literature as an Environmental Education Approach: A Proposal for a Teacher Preparation Program, University of the Philippines, by Narita Manuel Gonzalez ...p. 37

(Volume III 1980 continued)

Urban Ecology: An Audiovisual Presentation, by Mary Frost Lawton...p. 37

Inservice Environmental Education Model for Bilingual Classroom Personnel, by Julia Nieto...p. 38

A Survey of Hong Kong Elementary Teachers' Attitudes Toward Environmental Education, by Wun-Ping Ma...p. 38

A K-12 Curriculum Model for Environmental Education: Teaching Toward Ethical Decision-Making, by Carolie B. Sly...p. 39

Attitude Change Toward the Environment and Toward Outdoor Education of Counselor-Teachers in a Resident Outdoor Education Program, by Dianna L. Elliott...p. 39

Adventures in Environmental Chemistry, by Edward F. Carmo...p. 40

A Teacher Assessment of the Understanding and Use of Goals for Curriculum Development in Environmental Education, by Randall Champeau...p. 40

Some Values in Outdoor Education for Enrichment of Curriculum, by John Rossi...p. 41

A Pilot Study for Encouraging Teachers to Use an Environmental Learning Center, by Marjory L. Galvin...p. 41

Planning Travel to Enhance Classroom Teaching, by Lucille Ward...p. 42

Extent of and Need for Interdisciplinary Environmental Education, by Elois Demaray ...p. 42

Environmental Education Intern Process: An Evaluation, by Janis Albright...p. 43

Changes in Attitudes Toward Environmental Education and Selected Teacher Behaviors of Teachers Participating in Environmental Education Workshops, by Teresa A. Meyers ...p. 43

A Study of the Influence on Participants of an Environmental Education Workshop, by Maxine Burnworth...p. 44

A Comparison of Selected Training Programs for Environmental Education Volunteers, by Mary Hallesy...p. 44

6. Citizen-Centered Studies

Public Involvement in the USDA Forest Service, by M.A. Press...p. 45

Beverage Container Deposit Legislation--A Paradigm For Future Environmental Progress, by Mark Alexander Ishkanian...p. 45

Preference Input Forms as a Method of Obtaining Feedback From Citizen Advisory Committees in the Public Participation Program of a Water Resources Planning Study, by Josephine Marquis Smith...p. 46

Diffuse Concerns: An Assessment of the PLUARG Public Consultation Program, by R.A. Mason...p. 46

Land Use Policy Formulation in Northern Communities, by K.L. Persson...p. 47

A Study of Variables Associated With Environmental Action and Locus of Control Among Four Dissimilar Populations, by Joyce Mowery Smith...p. 47

Attitudes, Values, Communication Principles, and the Analysis of Waste Management Policy for Cold Climates, by F.J. Tester...p. 48

Employee-Public Evaluation of Industrial Pollution Control, by Mark A. Stelmacher ...p. 48

An Investigation of the Relationship Between "Sense of Community" and the Physical Environment of Residential Areas, by M.F. Soper...p. 49

Resource Recovery in McHenry County--Present Practice and Future Possibilities, by Alice Vild Howenstine...p. 49

Nose Hill: Concepts for Its Use, by S. Barber...p. 50

Flood Risk Maps, and Local Attitudes to Floods and Flood Mitigation, as Part of the National Flood Damage Reduction Program: A Comparative Review, by John W. Handmer...p. 50

Paradigms for Paradise: A Study of Environmental Values in the United States, by Judith Bonney Meckling...p. 51

Attitudes of the Public and Citizen Advisory Committee Members Toward Land and Water Resources in the Maumee River Basin, by Calvin Lee Taylor...p. 51

7. Resources, Administration and Others

Improving Access to Master's Theses in Environmental Education, by Christopher Yuen ...p. 52

A Study of Selected Env. Ed. Coordinators in the Commonwealth of Pennsylvania, by Christene A. Almon...p. 52

The Environmental Impact as Related to Financial Institutions, by Bennie Littles ...p. 53

The History and Development of the Department of Natural Resources at Ball State University, Muncie, Indiana, by Pamela Sue Popovich...p. 53

The Development of Marine Science Mini-units for Use on the Secondary Level, by Milton Werner...p. 54

Henry David Thoreau: A Qualitative Naturalist's Approach to Nature Study, by David A Pepi...p. 54

Evaluation of a Teacher's Guide Integrating a School Garden With Curriculum, by Dianne L. Peterson...p. 55

The Nature and Extent of Raptor Shooting in the Northeast With Recommendations For an Education Program, by Bruce Wright Talbot...p. 55

Crafts and Simple Teaching Devices for Environmental Education, by John L. McNeel ...p. 56

Farm, Food and Environmental Education, a Manual for Elementary School Teachers, by Eric L. Jorgensen...p. 56

A Guide to the Common Wild Shrubs and Vines of Pennsylvania, by Robert Maloney ...p. 57

Eco-Tour, by Phil Ockerman...p. 57

The Potential for Managing Various Insects and Their Habitats for Educational Purposes, by Susan G. Kains...p. 58

Extending Environmental Learning Through a Visual-Verbal Process: Some Activities for Second Grade Students Using Soil Animals, by Peter H. Debes...p. 58

VOLUME II (1979)

1. Site Analysis

The Recreation Potential and Aesthetic Qualities of Two East Texas Rivers, by David M. Knotts...p. 3

Hobcaw Barony Interpretive Conceptual Master Plan, by John D. McEachern...p. 3

Haywood County, North Carolina, Hospital: Development of a Nature Trail for Patient Therapy, by Elizabeth Moore...p. 4

An Approach to Play Area Design, by Donna W. Pitz...p. 4

A Self-Guiding Interpretive Trail at Camp New Hope, by Jody M. Roesler...p. 5

Ecological Survey of Fairbanks Wildlife Management Area, by Michael A. Spindler ...p. 5

Lake Louise: A Site Analysis and Development Proposal, by Janet Carpenter Thomas ...p. 6

2. Parks--Users and Interpreters

User Perceptions, Attitudes, Environmental Preferences: An Aid to Coastal Planning, by Gerald Doell...p. 7

Directory of Interpretive and Environmental Education Areas and Facilities in Idaho, by Diane Spott...p. 7

3. Media Communications

The Environmental Voice of the Oil and Forest Industries, 1958-1977, by Nancy Bavec ...p. 8

Environment: Covering the Urban Millieu, by Robert A. Griffin...p. 8

An Inquiry Into the Role of Social Mythologies as Root Causes of Environmental Problems, by William Garth Hansen...p. 9

Environmental News Coverage on Wisconsin Daily Newspapers: A Comparison of Reporter and Editor Views on Environmental Issues, by Ronald C. Holcomb...p. 9

The Metropolitan Milwaukee Area Carpooling Program: Using Communication to Promote Environmentally-Sound Behavior, by Susan McDowell O'Connell...p. 10

Attitudes of American Magazines Toward Atmospheric Nuclear Testing, 1945-1965, by Frederick Michael O'Hara, Jr. ...p. 10

Mantahala Highway Simulation Game, by David M. Plott...p. 11

Space Utilization in Natural Resources Magazines, by Bruce Stromp...p. 11

4. Pupil-Centered Studies

The Effects of Participation in a Naturalist Aide Program on the Self-Concepts of Senior Citizens, by Ronald H. Ahlbrandt...p. 12

The Effects of a Water Conservation Instructional Unit on the Values Held by Sixth Grade Students Concerning Water Conservation, by Andrew Aird...p. 12

Adult-Child Cross-Age Environmental Education, by Beverly Jo Angell...p. 13

Middle School Students' Value Clarification in Environmental Education as a Function of Autonomous Research, by R. Henry Bisaga...p. 13

Influence of an Outdoor Environmental Residential Experience on Attitudes, by Flora E. Bozzone...p. 14

Environmental Education in an Economics Context: Effects on Students' Knowledge and Attitudes, by Diane L. Brook...p. 14

Self-Esteem and the United States Youth Conservation Corps Enrollee, by Jerilyn Everhart Brunke...p. 15

The Effect of a Four-Week Primitive Camping Experience on Inner-City Children's Perceptions of the Natural Environment, by Christine Chaapel...p. 15

The Web: An Environment Education Program For Summer Camps, by William S. Chlat ...p. 16

The Effects of Participation in a Creative Dramatics Program on the Self-Concept of Mentally-Retarded Children in a Six-Week Day Camp, by Johnathan Nichols Fisher ...p. 16

Change in Attitudes Toward Four Selected Environmental Issues of Enrollees in Two Eight-Week Youth Conservation Corps Camps, by David A. Haring...p. 17

The Effects of an Outdoor Interpretive Program on the Self-Concepts of Educable Mentally Retarded (EMR) Boys, by William P. Kaiser...p. 17

Recreation in the New York State Prison System, by Joseph Korb...p. 18

Comparative Effects of an Environmental Awareness and an Environmental Action Instructional Model on the Overt Environmental Behaviors of Eighth Grade Students, by John Ramsey...p. 18

Environmental Education for the Inner-City, by Harvey I. Rollerson...p. 19

The Effect of an Outdoor Adventure Program on the Self-Esteem of Delinquent Adolescents, by Robert D. Shull...p. 19

The Effects of Using Environmental Case Studies in a Taxonomic Biology Program to Influence the Environmental Attitudes of Tenth Grade Students, by Robert Joseph Wilson...p. 20

5. Teacher-Centered Studies

Characteristics of Selected Environmental Coordinators and Their Programs, by Christine A. Almon...p. 21

The Influence of a Teaching Model on Selected Preservice Teachers' Concepts in Ecology and Environmental Education, by William J. Bluhm...p. 21

An Analysis of Strategies for Teaching Environmental Concepts and Values Clarification in Kindergarten, by Covey K. Bryant...p. 22

A Proposal for Economic Education in High School, by Andrew W. Corcoran...p. 22

Ecological Succession in an Abandoned Field: Developed, Taught, Evaluated, by Norman E. Downing...p. 23

Attitude Change Toward the Environment and Outdoor Education of Counselor-Teachers in a Resident Outdoor Education Program, by Dianna L. Elliott...p. 23

(Volume II 1979 continued)

Knowledge of Federal and Illinois Pollution Control Agencies and Laws Held by Ill. Environmental Education Coordinators and Teachers, by Janet Fryman...p. 24

Environmental Education Instructional Materials: An Evaluation, by Sister Mary Lou Pleitner C.S.J. ...p. 24

6. Resources, Administration and Others

Public Involvement in Forest Service Planning With Particular Attention to Uwaharrie National Forest's Land Management Planning Project, by Jean E. Davis...p. 25

The Dynamics of Domination: A Metalogue Concerning Exploitation as Rooted Obstacle to Total Environmental Quality, by Glen Edwin Erickson...p. 25

An Experimental Trail Guide System For Use in Background Management, by Mary Sewall Lindsey Hamblin...p. 26

Management Possibilities for the Haw River Division of the Duke Forest With Emphasis on Recreational Trail Development, by John A. Hiott...p. 26

Legal Aspects of Health and Safety for Operating Youth Camps, by Angeline L.P. Hunter ...p. 27

The Continuing Education Needs of Wildlife Professionals Employed by New York State, by Mark A. Oberlander...p. 27

Unit Planning and the District Ranger, by Vincent J.A. Williamson...p. 28

VOLUME I (1978)

1. Site Analysis

An Interpretive Prospectus For the Clemson Experimental Forest, Clemson University, South Carolina, by Lynne R. Beeson...p. 3

The Analysis of the Development of an Interpretive Center Museum to Interpret Environmental Dynamics: A Case Study of the Man, Time and Environment Museum at the Chippewa Nature Center, Midland, Michigan, by Felice V. Brunett...p. 3

Environmental Education--Moraine State Park A Development Plan, by John Patrick Cavanaugh ...p. 4

Freshwater Fish Pond Culture and Management, by Marilyn S. Chakroff...p. 4

A Conceptual Development Plan For a Commercial Outdoor Education/Recreation Enterprise in the Adirondack Mountains of New York, by James W. Culp...p. 5

Ecology of Central Washington Semi-Arid Lands: A Documentary Film, by Phillip R. DeBusschere...p. 5

Flora and Fauna of Po National Park, Upper Volta, West Africa, by Jon F. Heisterberg ...p. 6

A Study of User Patterns and Maintainence Guidelines for the Alum Cave Bluffs and Chimney Tops Trails, Great Smokey Mountains National Park, by Thomas Hallman Fearrington, Jr. ...p. 6

An Interpretive Prospectus/Park Plan for Redcliffe Plantation, by Jeffrey P. McNeill ...p. 7

The Identification and Evaluation of Specified Outdoor Environmental Education Sites in Eastern Washington, by Richard Niemeyer...p. 7

Developmental Plan for the Shenango Education Center, by Daniel Sherwin...p. 8

Heartland--A Natural History of Onondaga County, N.Y., by Mike Storey...p. 8

A Freshwater Wetland, by Stephen R. Scholle...p. 9

The Identification and Evaluation of Appropriate Outdoor Environmental Education Sites in Western Washington, by Susan Grunenfelder Wertz...p. 9

2. Parks--Users and Interpreters

A Basis for Interpretive Planning: The Demographic and Behavioral Characteristics of Visitors to the Eleven Point National Scenic River, Missouri, by Woodward Scott Bousquet...p. 10

Characteristics of the Visitors to the Environmental Education Area at Land Between the Lakes, Kentucky, by Amy Louise Esmond...p. 10

Interpreting a Museum Exhibit: The Message Effectiveness and Cost Effectiveness of Alternative Audio Messages, by Susan Kay Hambleton...p. 11

The Origin and Characteristics of Visitors at Selected Publicly Financed Recreation Areas In Indiana, by Thomas F. Hastings...p. 11

System for Measuring Visitor Participation in Interpretive Programs in Indiana State Parks, by Mary Ellen Herbert...p. 12

Interpretive Objectives From Audience Expectations at Selected Parks and Museums, by James Patrick Kranek...p. 12

The Effects of an Interpreter's Nonverbal Behavior on Park Visitors During a Natural History Presentation, by Patricia Lee Martinkovic...p. 13

Active Language in Interpretive Trail Signs and Rules Leaflets: Its Effects on Visitor Enjoyment and Information Retention, by Nancy J. Moeckel...p. 13

A Survey of Resource Materials for Environmental Interpreters, by Gary W. Mullins ...p. 14

Criteria for the Development of Interpretive Nature Trails for the Visually Impaired, by Jonathan R. Schwartz...p. 14

The Function of Interpretation as Perceived by Park Visitors and Interpreters, by Valeen Adams Silvy...p. 15

An Analysis of Selected Park Visitor Motivations for Attending Environmental Interpretation Programs, by John A. Veverka...p. 15

Visitor Analysis at the Cincinnati Zoo With Implications for Interpretive Planning, by Jill Rae Willis...p. 16

3. Media Communications

Communication Characteristics and Knowledge Levels of Selway-Bitterroot Wilderness Users, by William Wales Bramlette...p. 17

A Q-Study of Reader Attitudes Toward Conservation and Content for Missouri Conservationist Readers, by Gary D. Fitzgerald...p. 17

Attitudes and Information Sources of Hunters Toward Waterfowl Lead Poisoning and the Use of Non-Toxic Shot, by Donald W. Floyd...p. 18

(Volume I 1978 continued)

Environment: Covering the Urban Milieu, by Robert J. Griffin...p. 18

4. Pupil-Centered Studies

Supplementary Environmental Education Reading Program: As a Motivating Technique to Improve Reading Comprehension, by Sandra Terndrup Aimonetti...p. 19

A Study of the Relationship Between Superstition and Perception of the Natural Environment Among Children in Marion, Indiana, by Sam F. Carman...p. 19

Prior Membership in Outdoor-Oriented Organizations: Its Relationship to Environmental Attitudes in Young Adults, by Richard A. Ellis...p. 20

The Effects of a Simulation Game on the Attitudes of College Students Enrolled in an Environmental Management Course, by James Michael Heilman...p. 20

A Study of the Sixth Grade Environmental Education Program in Herkimer County, New York, by Joseph R. Lindenmayer...p. 21

An Evaluation of Environmental Education Attitude Changes of Students in Seventeen Fifth Grade Classes in Fox Chapel Area School District, Pittsburgh, Pennsylvania, Based on One-Week Residential Experience, by David Porterfield...p. 21

An Evaluation of Environmental Attitudes Developed in a Graduate Methods Class as Compared to an Undergraduate Methods Class, by Nancy Roberts Porterfield...p. 22

Environmental Attitudes of Sixth Graders After the Integration of Environmental Education Into the Language Arts Curriculum, by Jane S. Robbins...p. 22

The Effectiveness of Slide Presentations and Field Trips as Methods of Instruction for Environmental Education, by Robert Warren Schneider...p. 23

Attitudinal Changes as a Result of Outdoor Experiences, by Nancy Lower Sheetz...p. 23

Student Attitude Change As a Result of the Presentation of Materials Representing Various Opinions on Strip Mining, by Terry L. Wilson...p. 24

5. Teacher-Centered Studies

A Study of Factors Important to Environmental (Conservation-Outdoor) Education Instruction, by Wanda Kay Buterbaugh...p. 25

Assessment of Current Administrative Training of Chief Interpreters in a Six-State Region, by Rebecca Haserodt...p. 25

A Study of the Feasibility of Establishing an Environmental Education Center for the Columbus Public Schools, by Steven C. McCaw...p. 26

Factors Which Influence Elementary Teachers Use of the Out-of-Doors, by George d. Mirka ...p. 26

The Development of a Masters Level Environmental Education Program for Glen Helen at Antioch College, by Ralph Emerson Ramey...p. 27

Teacher's Guide to Aquatic Study for Cispus Environmental Learning Center, by John F. Scarola...p. 27

6. Resources, Administration and Others

Status of Environmental Education Programs in Public School Districts of the Commonwealth of Pennsylvania, by Jeanne Ann Ashley...p. 28

Outdoor Recreation Participation Levels With Cohort Analysis, by Duane Roy Dippon ...p. 28

The Role of the Environmental Education Consultant in an Urban Setting: Toledo Ohio, by B. Diane Boyd...p. 29

A Bibliometric Analysis of the Literature of Environmental Education, by Ronald W. Force...p. 29

A Study of Personal Participation in Action for Environmental Quality, by Mary C. Forrest...p. 30

Assessing Regional Meeting Participant's Opinions on Environmental Education Implementation Strategies for Ohio, by Michael Jerome Mann...p. 30

Environmental Impact of the Hanford Operations, by Delos Jan Mettler...p. 31

Resource Recovery in a Rural Community, by Judith Lynn Parson...p. 31

A Survey of the Adult Environmental Education Courses Offered by the Ohio Public School System, by Henry Ludwig Schulte, Jr. ...p. 32

Evaluation and Impact of Planning and Development Under the Washington State Shoreline Management Act, by Donald S. Skone...p. 32

The Effects of Dispersed Recreational Activities on the Microbiological Quality of Forest Surface Waters, by Kevin J. Varness...p. 33

An Investigation of the Status of Land Use Planning Education in Environmental Education Master Plans, by Debra Devers Walton...p. 33

Human Responses to Silvicultural Practices, by Jimmie L. Yeiser...p. 34

GRADUATE PROGRAMS IN ENVIRONMENTAL EDUCATION AND COMMUNICATIONS

This is the seventh volume of Recent Graduate Works to include descriptions of graduate programs in environmental education and environmental communications. Each year our listing has grown reflecting, we feel, the importance of this reference to individuals working in the field.

Program information is requested from all institutions contacted for thesis and dissertation abstracts. The information provided by the institutions is reproduced here exactly as it was reported.

The programs are listed alphabetically by state and then by institution. The information is organized in the following manner:

Name of the Institution
Division offering the program — Name of the person to contact for more information
Title of the program
(Degrees offered)

A brief description of the program.

We wish to thank all those who contributed information on their graduate programs.

ARIZONA

University of Arizona
School of Renewable Natural Resources
Renewable Natural Resources
(B.S., M.S., Ph.D.)

William W. Shaw
SRNR, Bio. Sci. East 325
University of Arizona
Tucson, AZ 85721

Coursework and graduate studies are available involving interpretation, education and communication as it pertains to the management of natural resources.

CALIFORNIA

California State University, Hayward
Department of Teacher Education
Master's in Curriculum with
Specialization E.E.
(M.S.)

Esther P. Railton
Dept. of Teacher Education
Cal. State U., Hayward
Hayward, CA 94542

The newly-revised program is for teachers, naturalists, recreation leaders. It includes one-third foundations courses, one-third electives and one-third environmental education. The latter addresses interdisciplinary infusion of E.E. in the curriculum, effective use of field trips and community resources, resident outdoor education and adventure programs.

California State University, Hayward
Department of Teacher Education
Environmental Education
(M.S.)

Esther P. Railton
Dept. of Teacher Education
Cal. State U., Hayward
Hayward, CA 94542

To meet changing needs of teachers, administrators, non-formal educators and park naturalists, all of the courses have been revised. The curriculum core (15-18 units) is complimented by EE in the curriculum. Resident Outdoor Education, Development of EE, Field Trips and Community Resources and Field Study (12-16 units) and electives (11-18 units).

Humboldt State University
Department of Education
Master of Arts in Education:
Special Studies Env. Education

Dr. Alan Leftridge
Environmental Ed. Coord.
Department of Education
Humboldt State University
Arcata, CA 95521

The focus is to help students become proficient with the methods of promoting environmental awareness. The degree is directed at students interested in developing ways of sharing their concern for their environments with certain audiences utilizing various educational and interpretive techniques. Degree may be obtained without possession of a teaching credential.

Stanford University

Department of Communications
(M.A., Ph.D.)

William Paisley, Assoc. Prof.
Department of Communications
Stanford University
Stanford, CA 94305

Students in the M.A. programs focusing on Journalism, Film, Broadcasting, or Communication Media and Social Change, as well as students in the Ph.D. program in Communication Research can elect to conduct thesis research on problems of environmental communication such as the flow of environmental information to the public and to policy-makers. Alternatively, students may participate in the design of information systems or campaigns to improve the flow of environmental information.

COLORADO

Colorado State University

College of Forestry and Natural Resources--Dept. of Education
Conservation Education
(M.Ed., M.S., Ph.D.)

Dr. Charles L. Mahoney
Prof. of Resource Conservation
Dept. of Recreation Resources
Colorado State University
Fort Collins, CO 80523

Graduate Programs lead to the Master of Education, Master of Science and Doctor of Philosophy degrees. The Conservation Education program prepares students to become teachers at the junior high and secondary levels. Emphasis at the graduate level is on furthering knowledge of natural resources conservation and management, developing more effective teaching techniques and innovative instructional programs.

DELAWARE

University of Delaware

College of Education
Educational Development
Environmental Education; Science Ed.
(M.Ed., Ed.D.)

Dr. Les Picker
College of Education
University of Delaware
Newark, DE 19711

This is a flexible program, designed to meet the employment needs of those entering the field of environmental education and/or science education. Teacher certification is required for entrance.

FLORIDA

Florida State University
Department of Curriculum & Instruction
Science Education (M.S. Ed.)
Social Studies Education (M.S. Ed.)

Dr. Rodney F. Allen, Professor
Social Studies Education

Dr. Ronald M. Good, Professor
Science Education

205 Stone Bldg.
Florida State University
Tallahassee, FL 32306
904/644-6553

No specific program in environmental education is offered; however, master's candidates in science and social studies education may develop a program of studies with that focus. Students are encouraged to do so.

GEORGIA

University of Georgia
College of Education
Adult Education (M.A.)
Science Education (M.A.)
Social Science Education (Ed.S.)
Recreation & Leisure Studies (Ed.D.)

Prof. R. N. Saveland
203 Dudley Hall
University of Georgia
Athens, GA 30602

Franklin College of Arts & Sciences
Geography Department (Ph.D.)

School of Environmental Design
Landscape Architecture (BLA, MLA)

School of Forestry

Institute of Ecology

No description of programs available.

HAWAII

University of Hawaii at Manoa
Dept. of Educational Foundations
Emphasis in Environmental Education
(Masters, Ed.D.)

Chairman, Graduate Field
Dept. of Ed. Foundations
University of Hawaii
West Annex 2, Room 222
1776 University Ave.
Honolulu, HI 96822

The department has several areas of emphasis, one of which is environmental education. The program works in conjunction with the Environmental Studies Program in the University.

IDAHO

University of Idaho
College of Forestry, Wildlife,
& Range Sciences
Interpretation/Communication
(B.S., M.S., Ph.D.)

Dr. William J. McLaughlin
Dept. of Wildland Recreation Mgmt.
College of Forestry, Wildlife,
& Range Sciences
University of Idaho
Moscow, ID 83843

Interpretation/communication is one of five curriculum options in the Department of Wildland Recreation Management. In addition to an introductory course in interpretive methods, majors take an applied laboratory course, at least 12 supportive electives, and practice interpretation with local school groups and through seasonal employment with land management agencies.

Work in environmental interpretation, environmental education or resource communications may be pursued through interdisciplinary studies leading to the M.S. in Wildland Recreation Management or to the Ph.D. Other areas of concentration include recreation planning, wilderness and dispersed recreation management, tourism, economics, administration and others.

ILLINOIS

George Williams College
Division of Leisure & Environmental
Resources Administration
Environmental Education/Interpretive
Services Administration
(M.S.)

Steve Van Matre
George Williams College
555 Thirty-first Street
Downers Grove, IL 60515-9960

The purpose of this concentration is to prepare leaders who can breathe freshness and vitality into peoples' appreciation and understanding of the world around them. The emphasis is on providing the skills necessary for effective motivation, communication, educational program development, organization, and administration. The program emphasizes the importance of sunlight, air, water, and soil as basic to any good environmental education or interpretive program. In the belief that lasting learning takes place when the learners are actively involved, the concentration is project-oriented. Whether one is interested in environmental education, natural or cultural interpretation, or a combination of all three areas, this program is designed to help the student become an effective leader in the field.

Northeastern Illinois University

College of Arts & Sciences
Dept. of Geography & Environmental Studies
Geography & Environmental Studies
(M.A.)

Karl A. Kriesel, Grad. Coordinator
Dept. of Geog. & Env. Studies
Northeastern Illinois University
5500 N. St. Louis
Chicago, IL 60625

Program is designed to provide advanced analysis of environmental and spatial systems. Included are ecological studies of human-environmental interrelations, studies of rapidly changing landscapes, locational studies concerning the geometrics of movement, size, shape and distance, and studies of environmental resources in terms of their interpretation, development and use. Urban land use planning sequence is also available.

Northern Illinois University

Lorado Taft Field Campus
Outdoor Teacher Education
(Ms. Ed.)

Dr. Clifford E. Knapp
Box 299
Oregon, IL 61061

The master's degree program in Outdoor Teacher Education consists of a minimum of 30 semester hours, 21 of which must be taken in outdoor-environmental education and 9 outside the area. Full-time students may complete the degree in one year. Thesis and non-thesis options are available as well as graduate assistantships and fellowships.

Northern Illinois University

College of Liberal Arts & Sciences
See description.
(M.S.)

Dr. Burley V. Bechdolt
Northern Illinois University
Department of Economics
Dekalb, IL 60115

The university offers M.S. degree programs in the following departments whose programs produce possibly significant graduate work on environmental topics: Biological Sciences (Ph.D. also); Geography (emphasis in Natural Environmental Systems, Urban Economics, and Meteorology); Geology; Economics (Ph.D. also); Chemistry (Ph.D. also); Physics; and Political Science (Ph.D. also).

Sangamon State University

Public Policy and Administration
Environmental Studies Program
(M.A.)

Alexander J. Casella, Ph.D.
Convener of Env. Studies Program
Sangamon State University
Springfield, IL 62708

The M.A. degree provides students with the knowledge and skills necessary to function effectively in today's environmental arenas. Students choose between a concentration in either Environmental Administration or Environmental Planning, with carefully structured curricula, or develop an Individualized Course of Studies in energy, bio-cultural education and interpretation and other related areas.

Southern Illinois University at Carbondale

Dept. of Curr., Instr. & Media	Dr. Harold Hungerford
Science and/or Environmental Ed.	Dr. Audrey Tomera
(M.S. Ed., Ph.D.)	Dept. of C.I.M.
	323 Pulliam Hall
	Southern Illinois University at Carbondale
	Carbondale, IL 62901

Degrees are offered in curriculum and instruction with an emphasis in either science or environmental education or a combination. The Ph.D. ionvolves a minimum of 64 semester hours. A research emphasis exists for all graduate programs. Many opportunities also exist for internships, practicums and cognate courses outside the College of Education.

Southern Illinois University at Edwardsville

School of Science and Technology	George Arnold, Coordinator
M.S. in Environmental Studies	Box 99
	Southern Illinois University at Edwardsville
	Edwardsville, IL 62026

The environmental studies program is interdisciplinary and leads to a Master of Science degree in Environmental Studies. The faculties of all departments are available for reference and instruction. Students select their own topics for research. Besides developing marketable skills in analysis and communication, the program attempts to cultivate broad perspectives on major environmental problems.

University of Illinois at Urbana-Champaign

Department of Forestry	T. J. Jacob
Ecological & Natural Resrouce Ed.	110 Mumford Hall
(M.S.)	1301 W. Gregory Drive
	Urbana, IL 61801

The graduate program in Ecological and Natural Resource Education is designed to train persons having an educational background to teach about ecology, natural resources and environmental issues or to further educate persons having a background in resources. Graduates of the program work in a wide variety of professional positions, ranging from resource managers to teachers.

INDIANA

Ball State University
Department of Natural Resources
Natural Resources
(M.S., M.A.)

Dr. Donald E. Van Meter, Chairman
C. O. Mortensen, Chairman
Department of Natural Resources
Ball State University
Muncie, IN 47306

The Department of Natural Resources, in the College of Sciences and Humanities, offers a graduate major in natural resources leading to a Master of Arts or a Master of Science degree. A cognate (minor) in natural resources is also available for graduate students pursuing doctoral degrees in several other disciplines. Graduate programs are individualized, with consideration given to the student's undergraduate academic background, professional experience, and future employment interests.

Indiana University
School of Public & Environmental Affairs
Environmental Programs
(MSES)

J. C. Randolph, Director
SPEA Environmental Programs
400 E. 7th
Poplars 438
Bloomington, IN 47401

Most of the environmental programs of Indiana University emphasize the application of environmental science to the policy-making process. The approach is solution-oriented. Most programs provide a basic background, with varying emphasis, on technical skills, applied science, and knowledge of the political process. Students become specialists in particular aspects of environment issues, yet have a broad perspective in terms of technical abilities and socioeconomic concerns.

Purdue University
Dept. Forestry & Natural Resources
Outdoor Recreation
(M.S., Ph.D.)

Douglas M. Knudson
Dept. of Forestry
W. Lafayette, IN 47907

Interpretation as part of recreation resource management is studied in terms of economic and sociological impacts.

IOWA

Iowa State University
Professional Studies in Education
(M.S.)

Dr. Thomas Tanner
141 Bessey Hall
Iowa State University
Ames, IA 50011
515/294-7252

In the following programs, whose numbers correspond to those above, there can be an emphasis on environmental education (EE), with EE faculty member as the major professor and EE as the topic of thesis or creative component. All programs are designed by student and major professor to meet the student's individual needs and interests.

(Description follows on next page.)

1. M.Ed. (creative component), M.S. (thesis), Ph.D. Administered by the department's Curriculum and Instructional Technology section.

2. M.S., M.A. The program is divided among three areas chosen by the student, e.g., botany, child development, education. All three contribute, in complementary fashion, to the creative component or thesis.

KENTUCKY

Eastern Kentucky University
Dept. of Recreation & Park Administration
Recreation & Park Administration
(B.S., M.S.)

Dr. James McChesney
College of Health, Physical Education & Recreation
Dept. of Recreation & Park Administration
Begley 403
Eastern Kentucky University
Richmond, KY 40475

Degree in Recreation and Park Administration with opportunity to focus on outdoor/nature interpretation and recreation programs. No thesis requirement.

Murray State University
Dept. of Instruction & Learning
Education (emphasis Environmental Education)
(M.A.)

Dr. Terry L. Wilson, Director
Center for Environmental Ed.
Murray State University
Murray, KY 42071

Murray State University offers graduate degrees with major emphasis in Environmental Education. The programs are administered by the center for Environmental Education and are designed to provide students with both classroom and practical experience. The program emphasizes holistic and humanistic approaches to teaching and learning, which focus on human/earth relationships. TVA's nearby Land Between the Lakes, a 170,000 acre national demonstration in environmental education and recreation, serves as an extended campus for formal and non-formal environmental education programs.

LOUISIANA

McNeese State University
College of Science
Environmental Science
(M.S.)

Dr. Victor Monsour, Chairman
Dept. of Environmental Science and Microbiology
McNeese State University
Lake Charles, LA 70609

This is a general program in environmental science. Thesis is optional. Total minimum semester hours for the degree with a thesis is 24; whereas, without a thesis, the minimum number of hours required is 36. Specialization comes via the thesis.

MARYLAND

The Johns Hopkins University
Dept. of Geography and
Environmental Engineering
(M.A., M.S.F., Ph.D.)

Dr. M. Gordon Wolman, Chairman
Dept. of Geography and
Environmental Engineering
The Johns Hopkins University
Baltimore, MD 21218

The program in geography and environmental engineering has three major facets: surficial earth processes, environmental engineering including systems analysis, and resources and human geography. The emphasis is upon research and teaching at the graduate level in problems crossing disciplinary lines. These include such areas as location of public facilities, regulatory mechanisms in resource management and pollution control, natural processes and their relation to human activities, and the impact of human activities on spatial location and cities. Environmental education and communication are not formal aspects of the curriculum, but closely related to the work and participation of students and faculty in education and environmental decision making.

University of Maryland, College Park
College of Agriculture
Environmental Education
(M.S.)

Dr. Jack Wheatley
Agricultural and Extension Ed.
Room 0200-Symons Hall
University of Maryland
College Park, MD 20742

This program provides expertise in content and methodology appropriate for outdoor education for school systems. Professional park naturalists also are attracted to the program due to this orientation. The program is cross-disciplinary, with students choosing courses from a number of areas, including biology, wildlife management, resource economics, education and geography.

MICHIGAN

Michigan State University
Department of Fisheries and Wildlife
Human Dimensions of F W Management
(M.S., Ph.D.)

Dr. R. Ben Peyton, Assoc. Prof.
Department of Fisheries
and Wildlife
Michigan State University
East Lansing, MI 48823

The graduate program serves interests ranging from formal EE to social aspects of F/W management. Course programs are designed by the student and graduate committee, but generally include courses in resource management education and research methods. Dept. of F/W offers unique opportunity to blend resource management content and EE methods.

University of Michigan
School of Natural Resources
Behavior & Environment Program
(B.S., M.S., Ph.D.)

Dr. Paul Nowak, Chairperson
2006 Dana
School of Natural Resources
University of Michigan
Ann Arbor, MI 48109

The School of Natural Resources offers both an undergraduate and graduate program in Behavior and Environment. Students can specialialize in Environmental Advocacy, Environmental Communications, Environmental Instruction or Outdoor Recreation. All four concentrations share common concerns. In each case, the student is asked to take course work in three areas: Theory and Concepts; Skill Acquisition; and Effecting Change. Students desiring work experience are also field placed.

MISSOURI

University of Missouri, Columbia
Graduate School
Environmental Sciences
(M.S., Ph.D.)

Dr. Howard C. Hopps, M.D., Ph.D.
Committee Chairperson
Department of Pathology
School of Medicine
University of Missouri
Columbia, MO 65212

Emphasis is on a multidisciplinary approach to environmental problems--one that cuts across conventional disciplinary barriers. Programs are tailor-made to fit the individual student's needs, and are under the continual supervision of the Environmental Sciences Graduate Area Program Committee. Particular areas of strength include ecology, agricultural sciences, the physical sciences, including the Trace Substances Analytical Center, and sociological approaches to man--environment interaction.

MONTANA

University of Montana
College of Arts and Sciences
Environmental Studies Program
(M.S.)

Ronald E. Erickson
Environmental Studies
University of Montana
Missoula, MT 59812

The program accepts students from any discipline (including a few from education in the past eleven years). Our concern is for analyzing and "solving" environmental problems, and advocacy skills are required. Most students do thesis work on either scientific questions or issues of public safety.

NEW YORK

Lesley College/National Audubon Society

Division of Outreach & Alternative Education
Lesley/Audubon Environmental Education Program
M.S. Environmental Education

Diana Cohen
National Audubon Society
950 3rd Avenue
New York, NY 10022
212/546-9126

Mary Huegel
Lesley College Grad. School
29 Everett Street
Cambridge, MA 02238
617/868-9600

Teaches deep ecology skills experientially in a two year close-knit traveling expedition community; a practical firsthand, nationwide examination of people, places and issues that leads to interpretive, outdoor, counseling, cross-cultural and academic competencies; an M.S. degree; postgraduate grants; internships; and environmental careers with National Audubon Society Expedition Institute affiliates.

New York University

School of Education, Health, Nursing & Arts Professions
Dept. of Cultural Foundations
Environmental Conservation Ed.
(M.A.)

Professor Tom Colwell
737 East Building
New York University
Washington Square
New York, NY 10003

Interdisciplinary Study of Major Environmental Issues. A wide range of elective courses from the many schools and divisions of the university in science and technology, media, social science and education are grouped around core courses and seminars in the philosophical and social issues of environmental problems.

State University of New York at Brockport

Dept. of Biological Sciences
Biological Sciences
(M.S.)

Dr. Joseph C. Makarewicz
Dept. of Biological Sciences
113 Lennon Hall
SUNY Brockport
Brockport, NY 14420

The Dept. of Biological Sciences offers two plans for the Masters of Science Degree in Biological Sciences: Plan I (a thesis program) or Plan II (independent research experience in lieu of thesis). The expertise and experience of 26 faculty members service about 30 graduate students in several areas of research. Approximately 13 faculty are active in environmentally oriented research and teaching. The Department is well-equipped with both conventional instruments and a number of unique facilities (e.g. artificial streams). Field equipment for aquatic and terrestrial ecology are available including four boats. The close proximity of the Finger Lakes Region, Lake Ontario, the Adirondack Park of New York, and the 500 acres at Fancher Campus of SUNY Brockport provide ample sites for ecological research.

State University of New York at Cortland

Division of HPER	Dr. Linda R. Meyer
Nature Recreation	Coordinator, Graduate Program
Outdoor Education	Dept. of Recreation Education
Camping	A-310 PER Center
(M.S., M.S. Ed.)	State University College, Cortland
	Cortland, NY 13045

A program designed to give graduate level exposure to camping and outdoor education fields. Designed for teachers, camp administrators, nature recreation personnel, and outdoor educators in agency settings. Core of research methods, seminar in literature of recreation and research, administrative problems of camping, outdoor recreation, outdoor education, electives in arts and sciences and supporting areas.

State University of New York at Syracuse

College of Environmental Science & Forestry	Prof. David Hanselman
Environmental Science	Env. Education/Communications
Environmental Education/Communication	311 Marshall Hall
(M.S., Ph.D.)	SUNY-ESF
	Syracuse, NY 13210
	315/470-6551

This college is upper division and graduate. M.S. and Ph.D. degrees in Environmental Education and Communications are pursued through interdisciplinary studies in the Graduate Program in Environmental Science. Each student, working with his/her professor, charts an individual program based on three criteria: depth in an appropriate subject area; breadth of educational experience; and synthesis of the components. The College is adjacent to Syracuse University and through a unique contractual arrangement, GPES-EE/C students have full access to resources of both ESF and SU. Of particular strengths are the wide array of course offerings in Environmental Science (including Social Science) and Public Communications.

NORTH CAROLINA

Duke University

School of Forestry and Environmental Studies	Dr. E. Garrett Martin
(M.F., M.E.M., A.M., M.S., Ph.D.)	Director of Admissions
	School of Forestry and Environmental Studies
	Duke University
	Durham, NC 27706

The school has four structured programs of study: Forest Resource Management, Resource Ecology, Water and Air Resources, Resource Economics and Policy. With faculty approval, students may devise areas of specialization within the structured programs or an individualized program to focus on environmental education and communication. Appropriate courses are offered on the Duke campus and at the neighboring University of North Carolina at Chapel Hill. Overall emphasis of the school is on resource management, problem analysis, and quantitative methods of decision making.

OHIO

Antioch University

Glen Helen Outdoor Education Center
Teacher/Naturalist Internships
no degree offered

Jean Horn, Director
Outdoor Education Center
1075 St. Rt. 343
Yellow Springs, OH 45387

Graduate students earn ten graduate credits going through five months of on-the-job training as naturalists, working with small groups of 5th-8th grade students who come by classes to our resident center. The facility is located in a 1,000-acre nature preserve owned by Antioch University.

Miami University

Institute of Environmental Sciences
Master of Environmental Science
(M.En.)

Gene E. Willeke, Director
IES, Miami University
Oxford, OH 45056

Two-year professional degree at Masters level. Students accepted from any academic discipline (sciences, arts, humanities). Fifteen areas of concentration that enable student to build on undergraduate strength. All students take core curriculum, area of concentration, and research (internship, practicum, or thesis). One area of concentration is environmental education. Entering class of about 25 per year with total of 60-70 students at any time.

Ohio State University

Environmental Education
Communications
Environmental Education
Environmental Interpretations
(B.S., M.S.)

Dr. Robert Roth, Chairman
Environmental Education
383 Kottman Hall
2021 Coffey Road
Columbus, OH 43210

Master's candidates may propose their own 45 hour thesis or 55 hour non-thesis program building on a 12 credit hour core of Natural Resources Courses. The candidates progression of courses must be discussed with the graduate advisor prior to acceptance. Criteria for program acceptance includes coherence, and interpretation, education, or communications applicability. Courses may also be taken in other departments.

University of Cincinnati

Curriculum & Instruction
Environmental Education
(M.Ed., Ed.D.)

Dr. Thaddeus W. Fowler
Teachers College, #2
University of Cincinnati
Cincinnati, OH 45221

Individualized program in environmental education with major emphasis on environmentalizing the classroom and using community resources. There is strong cooperation with the U.S. EPA and Cincinnati. A practicum is required.

OREGON

Southern Oregon State College
Graduate School--General Studies
M.S. General Studies: Outdoor Ed.
(M.S.)

Dr. Ronald D. Faut
Biology Department S.O.S.C.
Ashland, OR 97520

The outdoor education program strives to develop leaders in conservation and outdoor education. The program gives the student a broad background in the sciences and the social sciences, and an understanding of the interrelationships of the ecological and economic aspects of conservation. Techniques of outdoor education are emphasized.

PENNSYLVANIA

Pennsylvania State University

Recreation and Parks Department
Recreation and Parks (RC PK)
(M.S., M.Ed., Ph.D.)

Dr. Herberta M. Lundegren
267 Recreation Building
Penn State University
University Park, PA 16802

Prepares students for administrative, supervisory, research, and teaching positions in public and private recreation and park systems, in colleges and universities, in voluntary agencies and institutions, and in commercial ventures. The program is oriented to meet the specific needs and research interest of the candidate.

Slippery Rock University
Dept. Parks, Recreation,
and Environmental Education
Environmental Education
(B.S. in EE, M.Ed.)

Dr. Craig C. Chase
Dept. Parks, Recreation, and
Environmental Education
Slippery Rock, PA 16057

The graduate degree is designed to prepare program administrators with an expertise in EE programs, site-planning, and fund-raising, as well as field knowledge of environmental components encountered.

University of Pittsburgh
Teacher Development
Science Education
(M.Ed., Ed.D.)

Dr. Albert P. Nous
Assoc. Prof. of Science Ed.
4C12 Forbes Quadrangle
University of Pittsburgh
Pittsburgh, PA 15260

Master and doctoral level coursework is directed at the design of instructional resources, assessing the extent of cognitive growth of science concepts in young children and adolescents, uses of microcomputers in environmental simulations, and assessing needs of school and community interest groups. The improvement of science education in schools is the primary goal.

SOUTH CAROLINA

Clemson University
Recreation and Park Administration
Environmental Interpretation
(M.R.P.A.)

H. Jesse Grove
277 Lehotsky Hall
Clemson University
Clemson, SC 29632

Students are prepared to function as historic/natural site interpreters themselves, or to effectively utilize the talents of staff interpreters in the role of a recreation and park administrator.

TENNESSEE

East Tennessee State University
School of Public & Allied Health
Environmental Health
(M.S.E.H., M.P.H.)

Dr. Monroe T. Morgan
Professor and Chairman
Department of Environmental Health
P.O. Box 22960A
East Tennessee State University
Johnson City, TN 37601

Graduate education in environmental health is offered to prepare administrative and technical generalists for a variety of high level positions. Emphasis may include a variety of areas, such as epidemiology, water resources management, food sanitation, air pollution control, solid waste management, occupational safety and health, environmental analysis, and more.

TEXAS

Stephen F. Austin State University
School of Forestry
School of Education
Outdoor/Environmental Education
(B.S., M.S., D.F.)

Dr. Michael Legg
Box 6109 SFA Station
Nacogdoches, TX 75962

A strongly resource-oriented program that is cooperative between the Schools of Education and Forestry. Oriented toward preparing teachers for teaching in outdoor laboratories or nature centers.

Texas A & M University
Department of Recreation & Parks
Recreation & Resources Development (Interpretation)
(MAg., M.S., Ph.D.)

Dr. James H. Gramann
Dept. of Recreation & Parks
Texas A & M University
College Station, TX 77843-2261

The Interpretive Option identifies and provides research-based solutions to communication problems encountered by administrators, managers, practitioners, and educators. The focus is upon the utilization of interpretation as a resource management tool, and upon the communication of technical knowledge in resource management to lay audiences.

UTAH

University of Utah
Dept. of Communication
Communication
(M.A., M.S., Ph.D.)

Dr. Michael Pacanowsky,
Director of Graduate Studies
Dept. of Communication
University of Utah
Salt Lake City, Utah 84112

The department of communication at the University of Utah provides a broad-based theoretically oriented graduate program in communication studies. A primary area within the program is policy research and studies within a communication theory framework are strongly encouraged.

VERMONT

University of Vermont
School of Natural Resources
Natural Resources Planning (M.S.)

College of Education & Social Serv.
Teacher Education (M.Ed.)

Dr. Thomas R. Hudspeth
Environmental Program
University of Vermont
153 S. Prospect
Burlington, VT 05401

The UVM School of Natural Resources offers a Master of Science degree in Natural Resource Planning. This interdisciplinary program deals with numerous topics in the broad areas of environment and natural resources. Students choose either a thesis option (30 semester hours of graduate level courses) or a project option (36 hours of graduate level courses). Course selection depends on the personal interests of the students, and varies considerably among participants in the program. Students work closely with their advisors and studies committee. Among possible concentrations or thrusts in the program are: (1) Environmental Education, (2) Environmental Interpretation, (3) Environmental Communication, (4) Environmental Studies, (5) Environmental Natural Resource Planning, (6) Citizen Participation/Citizen Involvement, and (7) Natural Areas.

VIRGINIA

University of Virginia
Art and Sciences
Dept. of Environmental Sciences
(B.A., M.S., M.A., Ph.D.)

George M. Hornberger, Chairman
Dept. of Environmental Sciences
University of Virginia
Charlottesville, VA 22903

In 1969 the University of Virginia established an interdisciplinary program in environmental sciences to further the understanding of natural and human environments, to foster scientific analysis of environmental issues and problems, and to develop a rigorous academic program for students interested in a comprehensive approach to questions of environmental quality. The department attempts to educate two types of persons: (1) those who wish to acquire a broad, thorough understanding of basic environmental phenomena and processes, and (2) scientists who can make effective contributions to the fundamental knowledge of environmental systems.

Virginia Polytechnic Institute & State University

University Center Env. Studies
Environmental Studies
(M.S., Ph.D.)

Dr. John Cairns, Jr.
University Center
Environmental Studies
Virginia Polytechnic Institute
and State University
Blacksburg, VA 24601

The University Center for Environmental Studies (UCES) was established in 1970 by the Board of Visitors as a component of the Virginia Tech Research Division. The Center is authorized to coordinate and focus University and sponsor resources on environmental problems and concerns within Virginia and encourage the development of environmental information appropriate to worldwide application.

WASHINGTON

University of Washington

College of Education
C & I: Environmental Education
(M.Ed.)

Dr. Roger G. Olstad
201 Miller DQ-12
University of Washington
Seattle, WA 98195

A program intended for certificated teachers who wish to specialize in environmental education during Master's degree study. It combines work in environmental studies with education, and includes independent study options for students to explore areas of particular interest.

University of Washington

Institute for Environmental
Studies (FM-12)
"Interns in Environmental
Decisionmaking"
None

Ms. Vim Crane Wright
Asst. Director
Instit. for Env. Studies
University of Washington
Seattle, WA 98195

The "Interns and Environmental Decisionmaking" graduate program was established to train graduate students from a variety of departments in the social, natural and physical sciences to apply technical information in making policy decisions about complex environmental issues. The program involves two core courses ("Science and Environmental Policy: Theory" and "Case Studies"), a 4-18 month internship, and a summary paper.

Washington State University

College of Education, Science,
Agriculture, and Engineering
Environmental Science and
Regional Planning
(B.S., M.S., M.R.P.)

Dr. Eldon Franz
E. E. Coordinator
Program in Environmental Science
and Regional Planning
Washington State University
Pullman, WA 99164-4430

The program coordinates education in two closely related fields: environmental science and regional planning. The course of study for each student is flexibly designed in a unique, multi-optional interdisciplinary context. Majors specializing in Environmental Education are granted Senior High School teaching certificates with endorsements for the major and minors in physical and biological science.

Washington State University
Department of Sociology
Environmental Sociology
(M.A., Ph.D.)

Riley E. Dunlap
Department of Sociology
Washington State University
Pullman, WA 99164

The graduate program in Environmental Sociology is one of several areas of specialization in the Department. Available courses include environmental sociology, social impact assessment, energy and society, human ecology and demography. Students may take an applied or a more theoretical approach for their comprehensive exams and theses.

WEST VIRGINIA

West Virginia University
Division of Forestry
Environmental Concerns
and Interpretation
(M.S.)

Dr. Gene Bammel
325 Percival Hall
West Virginia University
P.O. Box 6125
Morgantown, WV 26506-6125

W.V.U. offers a graduate program in Environmental Education and Interpretation preparing the graduate for a career in Environmental Education, Administration or Policy Analysis. Course work is complemented either by a thesis or by a research problem. Unobtrusive measures of research have been emphasized; federal, state, and private facilities have been research opportunities. At least nine hours must be taken in graduate programs outside the Division of Forestry. Some research assistantships are available.

WISCONSIN

University of Wisconsin, Madison
Center for Environmental Comm.
and Education Studies
Environmental Communications
(M.A., M.S., Ph.D.)

Dr. Clay Schoenfeld, Chairman
Center for Environmental Comm.
& Education Studies
433 North Murray
University of Wisconsin
Madison, WI 53706

The Center for Environmental Communications and Education Studies is an informal consortium of faculty and students from a number of UW-Madison departments, developed to appropriate cooperative teaching, research, and extension programs. The Center aids the professional training of specialists in environmental communications, sponsors studies of environmental communications media and methods, and provides various symposia and services.

University of Wisconsin, Madison
Department of Agricultural Journalism
Natural Resources Communication
(M.S.)

John H. Fett, Chairman
440 Henry Mall
University of Wisconsin
Madison, WI 53706

To provide individually designed programs to equip natural resources professionals with better communication skills, journalists with more complete environmental knowledge, and both with an understanding of evaluation research.

University of Wisconsin, Madison
Institute for Environmental Studies
Land Resources Program
(M.S., Ph.D.)

Barbara L. Borns
Academic Support Specialist
Institute for Environmental Studies
60 Science Hall
550 N. Park Street
University of Wisconsin
Madison, WI 53706

Interdisciplinary program leading to Land Resources M.S. and Ph.D. with Land Resources major. Especially designed for students wishing to broaden their knowledge related to land and natural resources or who, because of employment or other experience, need special training in technical, social or management aspects of land.

University of Wisconsin, Madison
Institute for Environmental Studies
Water Resources Management Program
(M.S.)

Dr. Arthur B. Sacks, Assoc. Director
Institute for Environmental Studies
Instructional Program
72 Science Hall
550 N. Park Street
University of Wisconsin-Madison
Madison, WE 53706

Water Resources Management is an interdisciplinary program leading to the Master of Science in Water Resources Management. Students gain breadth in relevant planning and management areas while developing depth in one of several area specialties. The program prepares graduates for employment in water resources management activities. In lieu of a thesis, a team water resource management project is required, normally resulting in a published report.

University of Wisconsin, Stevens Point
College of Natural Resources
Environmental Education
(M.S.)

Dr. Richard Wilke
College of Natural Resources
University of Wisconsin
Stevens Point, WI 54481

The College of Natural Resources offers both an undergraduate and graduate program in Environmental Education. Students can specialize in Environmental Education Instruction, Adult and Community Based EE, Environmental Communication or Environmental Interpretation. In all cases, students develop competencies in ecology, environmental awareness, issue investigation and evaluation, and environmental action. Relevant practical experience is available for all through the University's Central Wisconsin Environmental Station and Schmeeckle Reserve.

WYOMING

University of Wyoming
Grad. Program in Community & Regional Planning
Master in Planning Program
(M.P.)

Hans Bleiker, Director
Community & Regional Planning Program
c/o Dept. of Geography
University of Wyoming
Laramie, WY 82071

This program is designed to prepare individuals to function as managers, directors and administratory of multi-disciplinary, public-sector problem-solving/decision-making efforts. The core courses are taught in the format of weekend seminars. This format allows non-local public officials and other working professionals to take the courses with a minimum of interference with their jobs.

University of Wyoming
Dept. of Geography/Planning/ Recreation
Grad. Program in Community & Regional Planning
(Master of Planning)

Hans Bleiker, Director
Box 3371
University of Wyoming
Laramie, WY 82071

Our core courses develop your Problem-Solving & Decision-Making expertise because that's what planning is: Problem-Solving & Decision-Making. After having all the fundamental tools for personal and corporate Problem-Solving & Decision-Making, you advance to learning the tools for public-sector Problem-Solving & Decision-Making. Specifically, you learn a methodology for preventing and/or resolving the kinds of public conflict that often stand in the way of solving important public-sector problems.

CANADA

Simon Fraser University
Faculty of Education
Environmental Education
(M.Ed.; M.A., Ed.; M.Sc., Ed.; Ph.D.)

Dr. Milton McClaren
Associate Professor and Coordinator
Environmental Education Emphasis
Faculty of Education
Simon Fraser University
Burnaby, British Columbia, V5A 1S6
CANADA

The faculty of education allows students in graduate study in curriculum and instruction to undertake a special emphasis in environmental education. The program takes an interdisciplinary approach to EE, addressing school-based and non-school-based approaches. The program also considers urban studies, outdoor education, and contemporary environmental/social issues.

University of Alberta

Department of Forest Science
Interpretation Studies option of
the Wildland Recreation Program
(M.Sc., Ph.D.)

Dr. James R. Butler
Wildland Recreation &
Interpretation Studies
Department of Forest Science
The University of Alberta
Edmonton, Alberta T6G 2H1
CANADA

Graduate studies in Environmental Interpretation are within the M.Sc. (Wildland Recreation) Degree. Program is directed to the development of Interpretive Managers and researchers more than as practitioners. Strong international focus. Five specific interpretation courses are available for graduate credit. Program has a Parks, Wildlife, Natural Resource Management emphasis.

University of British Columbia, Vancouver

Resource Management Science
(M.Sc., Ph.D.)

L. M. Lavkulich, Chairman
Resource Management Science
University of British Columbia
3075 West Brook Mall
Vancouver, British Columbia V6T 2A2
CANADA

Program is an interdisciplinary program in resource management. Students may specialize in a number of concentrations via land management, wildlife management, fisheries management, range management, water resources management and ecological policy analysis. New concentrations being developed include renewable energy and aqua culture. Programs are "tailor-made" for individual students to meet student desires as well as academic excellence.

The University of Calgary

Faculty of Environmental Design
Environmental Science
(M.E.Des.)

Professor Dixon Thompson,
Programme Director
Faculty of Environmental Design
The University of Calgary
Calgary, Alberta T2N 1N4
CANADA

The degree Master of Environmental Design (Environmental Science) prepares students for the new and expanding professional and scientific research opportunities in environmental consultant practices and government programmes. It embraces the spectrum of interests, among them, impact assessment, landscape rehabilitation, ecological analysis and modelling and research, wildlife management, energy and water conservation and management. The programme normally requires three years of study. Graduates are in high demand in both public and private sectors.

University of Toronto

Institute for Environmental Studies
Collaborative Programme in Env. St.
(M.A., M.Sc.)

Professor A. P. Grima
Instit. for Environmental Studies
Haultain Building
170 College Street
University of Toronto
Toronto, Ontario M5S 1A4
CANADA

The Institute for Environmental Studies is an interdisciplinary center for research and study which offers association with a wide range of biologists, engineers and social scientists. The primary goal of the Institute is to provide the facilities and academic ollimate for problem-oriented research to those who wish to maintain their discipline-based academic work. M.A./M.Sc. programmes are therefore undertaken on a collaborative basis with the departments of Geogogy, Botany, Forestry, Zoology, Geography, Anthropology, Political Science and Public Administration.